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11 JUNE 1986

Worldwide Report

EPIDEMIOLOGY



FOREIGN BROADCAST INFORMATION SERVICE

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11 JUNE 1986

WORLDWIDE REPORT
EPIDEMIOLOGY

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WORLDWIDE AFFAIRS

EAST BLOC COUNTRIES GRADUALLY ADMITTING AIDS PROBLEMS

Copenhagen INFORMATION in Danish 7 Apr 86 p 2

[Article by Lena Baden, Ritzau's Bureau correspondent: "The East Bloc Countries Change Their Minds: AIDS Is Also a Problem for Us"]

[Text] Doctors from all East Bloc countries are taking part this week for the first time in an international congress on the disease.

The immune deficiency disease AIDS is about to become an unpleasant reality also for East Europe.

The UN's health organization, WHO, on Monday is starting a conference on AIDS in Europe in the Austrian city of Graz, and for the first time all East European countries will be represented by physicians and researchers.

In the last conference, which has held in December of last year in Geneva, only the Soviet Union and Hungary took part from the East Bloc countries.

The media in all the East European countries have discussed the disease in several articles over the last year and a half, but most dissociated themselves with the disease and said that it first and foremost was a problem for the Western World because of the West's decadent way of life with regard to sexual practices and homosexuality.

Punishment

Until the first cases of AIDS were officially admitted in the Soviet Union, the disease, called SPID in Russian, was used as an element of anti-Western propaganda. The press talked straight out of the fact that AIDS was a kind of punishment for decadence in the Western World.

The weekly LITERATURNAYA GAZETA in October had a long article which developed further a theory to the effect that the AIDS virus possibly stemmed from American CIA laboratories for biological warfare. The virus had escaped in experiments which were made on narcotics addicts, homosexuals and homeless people in the USA.

The East German press has written, among other things, that the danger of AIDS' arising in the GDR is small because of the "social conditions" in the country. Both homosexual and heterosexual East Germans are therefore being cautioned against "uncritical partner contact," especially with people from countries in which the disease has been ascertained.

Rumanian Deficiency

Largely speaking, the media in the other East Bloc countries have the same attitude toward the disease and to a certain extent they have addressed the Western World critically. Only Rumania has been very reserved about discussing the disease at all, and when AIDS was finally discussed at the end of 1985, the information was very deficient.

One reason for this attitude is certainly Rumania's conduct toward homosexuality, which just as in the Slavic countries is a distinct taboo subject. The other risk group, narcotics addicts, is also not exactly a subject which is spoken loudly of.

In Rumania and the Soviet Union homosexuality is forbidden by law, which is to say that if people are caught in practicing homosexuality they can be punished. In the Slavic countries the subject is only mentioned seldom, and officially homosexuality simply does not exist.

East German Homosexuals

In the GDR the attitude toward homosexuality is far more liberal. Homosexuality became permissible in the GDR in 1968, and recently the official news bureau, ADN, called for greater openness regarding homosexuality and better integration of homosexuals in the East German society. On the other hand, narcotics addiction officially does not exist in the GDR.

The fact that now, largely speaking, all East European countries have ascertained several cases of AIDS or carriers of the disease has forced the East Europeans both to change their tone in discussion of the disease and to speak publicly about homosexuality.

The Soviet Union admitted on 7 December of last year that cases of AIDS had been ascertained. Officially two Russians--a woman and a man--and a couple of foreigners from the Third World have acquired the disease.

Will Frighten

Most East European media are now carrying informative articles about the disease. In the Soviet Union LITERATURNAYA GAZETA changed its mind completely and carried an objectively informative article on the entire problem area of AIDS and the chances of finding a vaccine against the disease. However, political observers think that the disease will still be used to frighten people out of contact with foreigners.

The Czechoslovak youth magazine MLADY SVET in its discussion of AIDS wrote with almost unheard-of openness about homosexuals' problems in the Czechoslovak society. Bulgarian professional journals and newspapers have also occupied themselves in detail with AIDS.

Two cases of AIDS have been officially ascertained in Czechoslovakia and four are infectious carriers of the disease. Rumors in Prague say that at least 10,000 are feared of being carriers of the disease.

In Hungary there is officially one case, and 40 have had antibodies ascertained. In Poland there are four regular cases, while nine have had antibodies ascertained.

Rumania and Bulgaria have not begun to report on cases to WHO, but according to unconfirmed reports, three cases should have been found in Rumania.

The conference in Graz has precisely the objective of getting all countries to take part in a so-called "reporting system" so WHO will get a reliable picture of the situation in Europe. The conference, which will last two days, will also try to plan a joint strategy to combat the disease on the global level.

Poland Pioneer

Poland was apparently the first East European country that took a realistic attitude to the problem. The Polish health authorities have occupied themselves with AIDS since the end of 1983. In 1985 the Polish Health Ministry issued 60,000 copies of an information pamphlet to physicians and health institutions, and more pamphlets are on the way.

Poland is taking the problem seriously because the country probably has the largest number of narcotics addicts in East Europe--around 300,000. At the same time Poland has very serious health problems already, with 22,527 cases of tuberculosis.

Besides, AIDS, which is the case for the other Slavic countries, has forced Poland to face reality with regard to the taboo subject of homosexuality, and recently the weekly POLITYKA wrote that there are about 270,000 homosexuals in the country and double the number of bisexuals.

Czechoslovakia reported for the first time on 14 February of this year that AIDS has been found in 10 [as published] homosexual men. Simultaneously with a panel discussion on TV between specialists from the Health Ministry, a large-scale information campaign on the disease was announced. Among other things, 10,000 people in the risk group are to be examined for the disease.

Ambitious Hungarian Plan

Both Hungary and the Soviet Union have plans to establish a research center for AIDS in Moscow and Budapest, respectively, and Hungary reported on

25 March that the routine screening of donors' blood and a nationwide examination of the population for AIDS will be carried out.

The Hungarian government has already purchased equipment for the AIDS examinations and has trained personnel to use it. Hungary is believed for the present to be the only country in the world which has taken so drastic a step in the fight against AIDS.

8831

CSO: 5400/2538

BARBADOS

BRIEFS

MORE AIDS DEATHS--Bridgetown, May 1--Barbados today reported the death from AIDS of three males last month, bringing the total number of persons who have died from the disease to 11--all men. The ministry said there had been a total of 14 cases at the country's lone general hospital, the state-run Queen Elizabeth Hospital. Only one AIDS patient remained a patient. Last month's deaths all occurred in one week. One of them generated such publicity that public pressure grew on the government to release more information on the number of cases. Months had passed since the last AIDS bulletin from the Ministry of Health. There were six deaths last year and one in 1984. Up to this time, the pattern of transmission of the disease in Barbados is essentially homosexual and bisexual, the ministry said today. A government statement said that infection from intravenous drug abuse had not occurred and with the safety screening and testing measures instituted for blood transfusion, the risk from contaminated blood was eliminated. It added that all blood donors were screened and blood was tested for the virus. [Excerpts] [Bridgetown CANA in English 2316 GMT 1 May 86 FL] /12712

CSO: 5440/077

BRAZIL

EXTENT OF EPIDEMICS RECALLS PROBLEMS OF COLONIAL ERA

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 24 Apr 86 p 29

[Text] Almost on the eve of the year 2000 the state of Sao Paulo faces epidemics and public health problems that are similar to those of Brazilian colonial times. People are still dying of snake bites for lack of antivenin. And the Ministry of Health admits that it won't be until 1987 that the country will be able to produce the 450,000 doses of serum that are needed. Last month two breeding grounds for the aedes aegypt mosquito, the carrier of yellow fever, were discovered in the Sao Paulo towns of Penha and Guarulhos. Last year six Sao Paulo cities were breeding grounds for the mosquito, and this year the number has risen to 42. The mosquito is spreading 43 years after having been declared extinct in this state.

"The existence of urban yellow fever in this state is scandalous," says the adjunct secretary of health of Sao Paulo, Otavio Azevedo Mercadante. But he also recognizes the existence of more serious illnesses such as malaria caused by parasitic microbes transmitted through the bite of the female anopheles mosquito. "The incidence of malaria has increased tremendously."

Another instance is that of dengue fever, an illness transmitted by the same mosquito as the one that transmits yellow fever. Dengue fever, eliminated in Brazil in 1955, and known in the last century as "polka fever," has returned as a threat. There are rumors, admitted by the secretary of health, Joao Yunes, of cases of dengue fever in the state of Sao Paulo. In Nova Iguaçu, in lower Fluminense, 2,000 inhabitants have already been stricken.

Since October 1984, 29 children aged three months to 10 years have died in the state of Sao Paulo as a result of purpuric fever. North American researchers from Atlanta were called in to help in discovering the causes of this illness.

Cases of AIDS in Sao Paulo are increasing at the rate of one per day, for a total of 500, 200 of whom have died. In the face of this situation traditional institutions such as Butanta and Adolfo Luiz are fighting to continue their research. Joao Yunes says that the budgets of the state health secretaries have been cut during the past few years. Mercadante, his assistant, blames the federal authorities for having abandoned their control of endemic and epidemic diseases. "Butanta sends 80 percent of its anti-venin outside the state," says Yunes.

Willy Becak, director of Butanta, says that it is not the institute that is facing a crisis: "It is the country that is facing a crisis." For example, not until 1987 will Brazil be self-sufficient in the production of anti-tetanus serum. Currently the Ministry of Health imports 12 million of that 25 million doses needed to prevent death by tetanus. Becak feels that it is necessary to give support to other research institutions, such as Vital Brasil in Niteroi, Ezequiel Dias in Minas, and Osvaldo Cruz in Rio in order for the country to become self-sufficient in the production of immunobiologicals. As far as Yunes is concerned, epidemics cannot be resolved at the state level.

12857/12948

CSO: 5400/2058

BRAZIL

BRIEFS

PURPURIC FEVER INCIDENCE--If the four cases suspected of being "Brazilian purpuric fever" in children from the city of Castilho in the interior of Sao Paulo are confirmed, the number of victims of this new illness, which has already caused 18 deaths this year, will rise to 33. Solange Pereira de Lima, 4 years old, one of the children hospitalized at the Santa Casa de Andrada--near Castilho--suspected of having the illness, died last week. The cause of the fever is as yet unknown, but the director of the Center for Epidemiological Vigilance of the state secretariat of health, Alexandre Vranjac, said yesterday that weekly studies carried out by a group of specialists causes them to believe that it "is probably bacterial." Yesterday, after the fourth meeting of the epidemiological specialists, he clarified that the incidence of the fever "is of great concern, but not alarming." He guaranteed that "the studies are well under way." The only correlation with the illness found up until now is conjunctivitis. In almost all of the purpuric fever cases that proved fatal the children had conjunctivitis 15 to 30 days before. Upon noticing any symptom of this illness mothers should seek hospital assistance. [Text] [Sao Paulo O ESTADO DE SAO PAULO in Portuguese 24 April 86 p 20] 12857/12948

MENINGITIS IN BAHIA--The secretary of health of the state of Bahia, Ursicino Queiroz, 48, yesterday in Salvador confirmed the existence of 16 cases of meningococcal meningitis in Bahia, 7 of them in Salvador. Nine people have already died as a consequence of the illness. Although there are already 255 patients suffering from various types of meningitis, Queiroz affirmed "that there is no risk of an epidemic in the state." According to him, "every control measure for the illness has already been taken by the secretariat." [Text] [Sao Paulo FOLHA DE SAO PAULO in Portuguese 1 Apr 86 p 23] 12857/12948

POLIO IN FEDERAL DISTRICT--It is not only in the northeast that children continue to be the victims of infantile paralysis. In the middle of the federal capital six cases of polio have been registered this year, which is quite serious since more than one case is considered to be an outbreak by the ministry of health. In order to avoid a spreading of the problem the secretary of health of the federal district carried out a massive vaccination on minors of less than 4 years of age in the satellite city of Guara, the closest to Brasilia center, and the site where four of the six registered cases occurred. This same type of vaccination was done last Saturday

throughout the northeast where just this year almost 200 cases of poliomyelitis and 16 deaths have been registered, in spite of the frequent national vaccination campaigns carried out since 1980. [Text] [Sao Paulo O ESTADO DE SAO PAULO in Portuguese 25 Apr 86 p 9] 12857/12948

SYPHILIS, AIDS INCIDENCE--The number of cases of AIDS in Brazil has already reached 650 since the identification of the disease in 1983. But a more serious problem among illnesses that are sexually transmittable is syphilis, which in Rio Grande do Sul alone affects 20,000 people per year. These were some of the conclusions reached by the 400 participants of the Congress of Sexually Transmittable Diseases and of the Latin American Conference on AIDS which were completed yesterday in Canela, 124 km from the capital. Considering the population of the country, the number of AIDS cases is not high. France, with a smaller population, has already registered 290 cases, according to specialists. Today, the majority of victims is concentrated in the large national urban centers, principally in Sao Paulo where there are already 400 known cases. Homosexuals continue to be the highest risk group (80 percent of the cases), and the reason is said to be their constant change of partners. Among the carriers of AIDS in Brazil, the number who are drug addicts is less than 15 percent, while this index in Puerto Rico, for example, is 35 percent. [Text] [Rio de Janeiro O GLOBO in Portuguese 22 Apr 86 p 4] 12857/12948

DENGUE FEVER, YELLOW FEVER VACCINATIONS--The minister of health, concerned with the proliferation of the aedes aegypti, the mosquito that carries yellow fever and dengue fever, is going to intensify vaccination efforts and the control of these illnesses, installing health posts along the principal roads leading to Amazonia and the central-west region, from where the illnesses have been imported. Authorities at the posts will ask to see vaccination cards, and those who have none will be vaccinated on the spot. The minister said yesterday that it will not be until tomorrow that it will be definitely known if the disease that has attacked more than 2,000 people in the Fluminense town of Nova Iguacu is really dengue fever. [Text] [Sao Paulo O ESTADO DE SAO PAULO in Portuguese 25 Apr 86 p 9] 12857/12948

CSO: 5400/2058

11 June 1986

CANADA

AIDS MEASURES, PROBLEMS, INCIDENCE DISCUSSED

Red Cross Insurance Cancellation

Vancouver THE SUN in English 8 Apr 86 p A6

[Text] TORONTO — Soaring premiums have forced the Canadian Red Cross Society to cancel its liability insurance on blood transfusions, but a spokesman denies the AIDS scare is the major reason for the increase.

"Blaming AIDS would be putting words in the mouths of the insurance companies," said Ian Morgan, the society's national director, administration.

Morgan said the society dropped its liability coverage on transfusions of blood and blood products after being told it faced a 10-fold increase in premiums.

The insurance companies cited a general increase in court awards in personal injury cases and "never mentioned" acquired immune defi-

ciency syndrome, he said.

Asked if fear of AIDS was a major, if unspoken, reason for the increase, he replied: "Would it be eight times or would it be 10 times, who can say? . . . Everyone is facing major increases."

Morgan said the society is currently "self-insured" but refused to disclose the size of the fund it has set aside. Negotiations for financial backing are still going on with the provincial ministries of health, he said.

The Red Cross supplies blood to all Canadian hospitals for transfusions and has been screening for AIDS since November.

So far only 0.02 per cent of blood donations have been found to contain AIDS antibodies, indicating exposure to the disease.

Vancouver Test Results

Vancouver THE SUN in English 8 Apr 86 p A6

[Text] The Red Cross testing procedure for AIDS antibodies in blood donations may not be perfect, but "the blood supply is indeed safe," a spokesman for the Red Cross said Thursday.

"The chances (of AIDS-infected blood getting through) are so small that it should not concern anyone," said Ken Mews of the agency's blood transfusion service in Toronto.

"The test that we have is the best possible one that we can put up. It's the best that is technically possible."

Vancouver acquired immune deficiency syndrome researcher Dr. Richard Mathias said some blood donations from people with low levels of antibodies may not be picked up by the test.

"There's always been a debate about the levels. The test doesn't flunk, it's just not perfect."

11 June 1986

Mathais said studies show between 98 and 100 per cent of AIDS-infected donations are picked up by the Red Cross test, and he said more false positives are likely to be found than false negatives.

"We take more blood out of circulation than is necessary and let as few slip through as possible."

Mews said about 0.4 per cent of donations appear positive after a

second test at the Vancouver Red Cross laboratories. These donations are destroyed, and a sample sent to the national lab in Toronto. When the samples are retested, the total positive result is only about 0.03 per cent of all donations.

He said women are more likely than men to test false positive because they are more likely to have another antibody picked up in the test.

Windsor Areas Cases

Windsor THE WINDSOR STAR in English 24 Apr 86 p A3

[Text] Four new cases of AIDS in the Windsor area in 1986 confirm predictions the disease is expanding rapidly in Windsor.

"We're up to one new case a month now," said Dr. Phil Fioret, associate medical officer of health for Essex County.

The new cases this year bring the number of local victims to 15, four of whom are still alive. Two of those diagnosed this year have died.

Last year, Dr. Fioret predicted the disease would reach epidemic proportions within Windsor's high risk group — gay men and those who abuse intravenous drugs.

All of the Windsor AIDS victims have been members of the high risk group, according to the Metro-Windsor Essex County Health Unit.

AIDS — Acquired Immune Deficiency Syndrome — breaks down the body's natural defences.

Bar Association Report

Ottawa THE WEEKEND CITIZEN in English 26 Apr 86 pp A1, A28

[Text] TORONTO (CP) — Testing for AIDS should be mandatory for immigrants to Canada and potential donors of blood, organs and tissues, says a report prepared for the Canadian Bar Association.

The report, which rejects calls for a large-scale system of compulsory testing for the disease, says however, that it does make economic sense for life insurance companies to have the right to test potential clients for acquired immunodeficiency syndrome.

One section of the report which is bound to be controversial, says that school children who suffer from AIDS should not be identified to the principals, teachers or parents of other children at the school.

According to this proposal, only

the school nurse, who is employed by the medical officer of health and not the school board, should be informed about students who suffer from the disease.

The report, prepared by 17 lawyers in the association's Ontario division, also rejects suggestions that a new law be enacted so that criminal charges can be laid against persons who knowingly transmit the disease. But the study, noting that civil cases have been launched in the United States, says similar suits could develop in Canada.

The report, which looks at how Canadian and Ontario law deals with the reporting and treatment of victims of AIDS, was accepted

by the group's Ontario wing and now will be forwarded to the national association.

As of April 21, there were 534 reported cases of AIDS in Canada with 264 reported deaths. High-risk groups include homosexual and bisexual men, intravenous drug users, recipients of blood transfusions and prostitutes.

The study says AIDS should be defined as a virulent disease, which means affected patients could be ordered to get medical treatment and confined to hospital.

Noting that some members of high-risk groups distrust health care agencies, the study recommends that hassle-free clinics be established where patients could be tested anonymously for the disease.

All potential donors of blood, semen and human organs should be routinely tested for the disease. But, they should also be informed that they are being tested and any positive results will be reported to government agencies.

It dismisses the idea that prison inmates be forced to take an AIDS test. However, it adds, pris-

oners should be tested on a case-by-case basis and any prisoner who tests positive should be kept in medical isolation.

While it also rejected calls to test all armed forces' recruits, it says any military member who works in an area where the disease is endemic should be encouraged to take a test for AIDS.

Surgeons, dentists and other health-care workers who get a positive reading have an ethical responsibility to inform their professional licensing bodies.

Immigration, the report says, is a privilege, not a right, and therefore it is reasonable to require tests of potential immigrants.

Those who are found to have a positive reading on their tests should have their case deferred for three years.

It adds it has seen a number of pamphlets linking AIDS with homosexuality — "pamphlets that could only be described as hate literature against homosexuals."

It says current federal and provincial legislation is not adequate to prevent this discrimination.

National Advisory Committee Guidelines

Ottawa THE CITIZEN in English 30 Apr 86 p B1

[Article by Jane Defalco]

[Text]

Children with AIDS should not be excluded from school, say new guidelines drafted by the federal National Advisory Committee on AIDS.

The guidelines are not binding. They say the child's right to privacy should be paramount and that school officials should not be informed a child has AIDS until special educational arrangements are required because of the student's condition.

Chairmen of three local school boards say they will follow the guidelines if the medical officer of health tells them to.

But regional medical officer of health Dr. Steve Corber refused to comment.

Carleton Board of Education Chairman Hal Hansen said his board will "abide by the advice of the medical officer of health."

Carleton Separate School Board Chairman Jocelyn Ladouceur said her board is working with Corber and following his rules in the matter.

"They are the specialists in the field and we're doing as they say."

Ottawa Board of Education Chairman Bill Gowling said the board would rely on the education ministry and public health officials to set any criteria that schools would have to follow in handling any cases of children with aids.

However, Gowling said he personally sees no problem with the guidelines as proposed by the National Advisory Committee.

The guidelines are the first official federal government policy on the management and care of school children with AIDS, says Dr. Alastair Clayton, head of the federal Laboratory Centre For Disease Control.

"Because of the panic and fears associated with this illness, confidentiality and the child's right to privacy should be paramount to prevent any social ostracism by classmates or teachers," say the guidelines.

However, the guidelines add that day-care workers should be informed if a pre-schooler has AIDS so they can take precautions against contracting the disease if they have to handle diapers that may carry the virus in feces or urine.

The federal recommendation, published in an April 19 bulletin to health care workers, is similar to one made in a report released this week by the Canadian Bar Association.

Clayton said the guidelines are not being distributed to school boards, but instead are being passed on to health care workers who are expected to informally discuss with parents and school staff the recommended approach to dealing with infected school children.

Local boards now have no policies that exclude children with AIDS.

So far, Corber has recommended, regardless of whether known cases are present, that all schools adopt good hygiene practices in handling mishaps where blood, stools, vomit or urine are involved.

AIDS, or Acquired Immunodeficiency Syndrome, is transmitted through bodily fluids and attacks the body's immune system.

The advisory committee guidelines for children with AIDS also state:

- If the medical officer of health decides to inform school officials, a meeting of the school principal, the child's teachers and parents should be mandatory to ensure everyone involved understands the situation and implications of any action taken.

- Each child should be assessed on an individual basis by the attending physician and officer of health to take into account the child's physical health and psycho-social aspects.

- An infected child should not be excluded from school unless the doctor and officer of health advise otherwise.

\$39 Million Government Funding

Ottawa THE CITIZEN in English 2 May 86 p A11

[Article by April Lindgren]

[Text]

A \$39-million, five-year commitment to AIDS research and education announced by the federal government Thursday will rescue community support programs from their shoestring existence, says a spokesman for the AIDS Committee of Ottawa.

Bob Read said the additional money promised by Health Minister Jake Epp could be used by organizations such as the Ottawa AIDS committee to improve education among high risk groups and possibly even for a local AIDS information hotline.

Over the next five years, up to \$25 million will be used to fund AIDS research, Epp said.

AIDS, a viral disease that destroys the immune system and is fatal in more than 95 per cent of cases, was first reported in Canada in February 1982. The disease is transmitted through the exchange of body fluids; high risk groups include homosexuals and intravenous drug users.

There have been 540 AIDS cases reported in Canada and more than 260 deaths.

To date, the federal government has spent about \$4 million on all aspects of the AIDS problem.

About \$1.3 million went to research, a figure that has drawn criticism from health professionals.

"Obviously France and the United States have put far more research money into AIDS than we have," said Dr. Alastair Clayton, head of the Laboratory Centre for Disease Control at Health and Welfare.

The additional \$5 million announced for this year by Epp brings the annual federal AIDS effort to \$7 million.

Of the additional \$5 million:

- \$2.5 million will go towards research to be done primarily by university researchers.
- \$700,000 is for campaigns to educate the public and health professionals.
- \$700,000 is for community support programs for high risk groups.
- \$890,000 goes to support a newly-created National AIDS Centre within Health and Welfare. The centre will provide policy support for the department, keep track of the incidence of the disease in Canada and co-ordinate departmental AIDS activities.
- \$700,000 is for Health and Welfare Canada laboratories for the development of new diagnostic tests and to train staff in Canadian centres in virus culturing techniques.

/13104
CSO: 5420/70

CANADA

SARNIA CHILDREN AFFLICTED BY E. COLI BACTERIA IMPROVE

Toronto THE GLOBE AND MAIL in English 7 May 86 p A24

[Text]

Normal kidney functioning is starting to return to three Sarnia, Ont., children afflicted by the same rare bacteria that killed at least 17 elderly residents last year at London's Extendicare nursing home.

The conditions of the three kindergarten pupils were upgraded to serious yesterday after they began producing urine for the first time since they were admitted to London's Victoria Hospital 2½ weeks ago.

Previously, the three were in critical condition after suffering kidney failure because of the E. coli micro-organism that was also detected in 24 other students from Queen Elizabeth Public School in Sarnia.

The school's kindergarten and junior kindergarten grades were closed by the Lambton Health Unit on April 22, but were to re-open today.

Dr. Timothy Frewen, director of Victoria Hospital's pediatric critical care unit, said yesterday that the improvement of the three children offers hope that their kidneys may return to normal.

/13104
CSO: 5420/70

CANADA

BRIEFS

MANITOBA MEASLES CASES--An annual event held by students in Western Canada and two U.S. states to model the United Nations Assembly has been cancelled because of the measles. Students in North Dakota and Minnesota are not being allowed to cross the border into Manitoba, said Dean Cousens, chairman of the sponsoring Winnipeg Rotary Club. There have been more than 2,000 cases of measles in Manitoba since the fall and U.S. officials feel contact with young people could worsen the situation in the two states, which have had about 20 cases. [Text] [Toronto THE GLOBE AND MAIL in English 5 May 86 p A24] /13104

CSO: 5420/70

DENMARK

NATIONAL HEALTH AGENCY ISSUES STATISTICS ON AIDS DEATHS

Copenhagen AKTUELT in Danish 6 Apr 85 p 3

[Article by Ismail Kristensen: "Fifty-One Danes Dead from AIDS"]

[Text] Fifty-one Danes have died from AIDS after the disease was ascertained for the first time here at home. This is shown by the Health Administration's latest figures prepared on 3 April.

Six Danes died from AIDS from 1981 to 1982. The number of deaths rose to 10 in 1983, while 12 died of the disease in 1984. Last year 22 died, and a single death has been ascertained for the present during the current year.

"We at the Health Administration are working on a more united plan for an intensified effort to stop the spread of the infection here at home. The effort up to now has been insufficient, and the Health Administration to begin with will discuss the plan with the Ministry of the Interior with a view toward a greater effort to get the special-risk groups to change their sex habits. The special-risk groups will be, to begin with, male homosexuals and drug abusers," Physician Michael von Magnus says.

"For drug abusers the goal must be especially to get them to use one-time hypodermic needles, whereby the spread of the infection can be stopped."

"The development here at home has also gone in the direction of the fact that we have fewer new drug abusers, with a considerable group of older abusers--with an average age of about 30--who have been through countless offers for treatment, without its having been successful."

"For this reason we must certainly also work toward a more varied treatment opportunity for this group. If we do not make more varied treatment offers--with methadone treatment, for example--we will not get a grip on this large group."

"The average hospitalization period for an AIDS patient is 100 days--equaling a cost of a half million kroner--which represent enormous sums to save for the society if we can halt the growth of the disease."

This is quite cynical arithmetic.

"The human suffering associated with the disease cannot be summed in money," Michael von Magnus says.

Swedes Being Examined

The first AIDS examination of a total group has become a reality in Sweden, where 10,000 men aged 20 to 65 in the Kalmar area are to be examined. The plan will possibly be extended so that it will come to include all men in Kalmar County.

8831

CSO: 5400/2538

DENMARK

EVERY TENTH NARCOTICS USER FOUND INFECTED WITH AIDS

Copenhagen BERLINGSKE TIDENDE in Danish 16 Apr 86 p 3

[Article: "Every 10th Narcotics Addict Infected with AIDS"]

[Text] Enköping (TT [Press Wire Service, Inc.]). The majority of narcotic addicts in the Nordic countries are not infected with the HTLV-III AIDS virus, it was learned from a Nordic conference on narcotics abuse and AIDS in Enköping, Sweden, Tuesday, in which 500 politicians, officials and experts took part.

There are, at a rough estimate, 20,000 needle-using narcotics addicts in the North, and it is estimated that only one out of 10 is infected with AIDS. But foreign experiences have shown that the infection spreads rapidly among this set, and the number of infection carriers has doubled in a half year in the North.

There have not yet been cases of the disease among drug abusers in Denmark, but there are a couple of hundred carriers of the infection in Copenhagen, Peter Ege of the Danish Alcohol and Narcotics Council related.

He was among those participants who stressed the importance of finding forms of treatment which are easy for narcotics addicts to get to. To begin with, this is a question of coming in contact with as many as possible and then to collect and channel them to more specialized treatment and curing of their dependence, before they become infected.

But although the conference believed that contact with the narcotics abuse group is too little, there is already a shortage of dependency-breaking offerings. The fear of AIDS has resulted in the fact that many who were not interested before have sought help, and it has been difficult to get a treatment system built up at the speed which is necessary.

8831

CSO: 5400/2538

DENMARK

COUNTRY ASSUMING LEADING ROLE IN AIDS, TROPICAL DISEASE RESEARCH

Copenhagen BERLINGSKE AFTEN in Danish 11-17 Apr 86 p 6

[Article in "Debate" section, by Ib Bygbjerg: "Viewpoint: Denmark's Role in AIDS and Tropical Disease Research"]

[Text] Wholehearted support from our privileged society is necessary if we are to get further in both AIDS research and in the fight against other serious infectious diseases which still make WHO's goal of health for all by the year 2000 utopic, writes First Resident Ib Bygbjerg of Rigshospitalet's [the National Hospital's] Epidemiology Department. Bygbjerg, who is also the president of the Danish Society for Tropical Medicine, at the same time points out a simple and ingenious method of identifying antibodies.

Research assumes, among other things, the ability to combine observations and to find new or larger connections.

Twenty-five years ago an English physician, Dennis Burkitt, was able, in the middle of his work at a mission hospital, to characterize a distinctive cancer tumor in Kenyan children. Then he charted the spread of the cancer in tropical Africa. It corresponded precisely to the spread of malaria. He was also able to send tissue specimens to researchers at home. One of these, Epstein, found in the specimens a virus--the first cancer-causing human virus. The Epstein-Barr virus was then detected in patients outside the tropics with a totally different disease picture--mononucleosis ("kissing disease"). That this virus also can result in cancer is probably due to the fact that chronic malaria or other infections are breaking down African children's immune defense.

The center of New York, Manhattan, has long had the nickname "the Tropical Island" because of the frequent incidence of parasites (amoebae), bacteria (among other things, certain exotic venereal diseases) and viruses (hepatitis B = infectious liver inflammation virus) among homosexuals--infections which otherwise are found especially in the tropics.

A new disease was discovered among homosexuals in the USA in 1981 and it quickly turned out that the same disease--AIDS--was widespread in tropical Africa, from which it presumably stems.

If one wishes to learn more about this disease, which is spreading explosively in both places, it is natural to compare homosexual New Yorkers with African prostitutes. Especially if it is feared that the disease can spread to heterosexual men and women as well as children in the USA and Europe. In Africa women and children are hit by AIDS almost just as frequently as men.

When it is suspected in addition that the interplay between viruses (the basic cause of AIDS is, as we know, a virus), bacteria and parasites is decisive for whether the AIDS infection will develop into an actual disease, and when it is known that the most frequent cause of death among AIDS patients is parasites, it stands to reason to study populations which are infected with such microorganisms simultaneously.

We know that malaria and other parasitic diseases can break down the defense apparatus (the immune system). Besides, it is enormously difficult to develop vaccines against, for example, malaria, bilharziosis and sleeping sickness, since parasites can mutate or mask themselves so that our immune system is fooled, even if it is not broken down.

The AIDS virus has the same alarming ability to break down or fool the immune system.

One of the hottest questions is which of the hundreds of thousands of those infected with AIDS will succumb and why. What contributing factors (infections?) are decisive?

Another decisive question is whether the infection of heterosexuals occurs just as easily as of homosexuals, or whether the AIDS virus is especially transferred if one has other infections at the same time.

These questions are naturally occupying the physicians, researchers and authorities who must contain the AIDS epidemic. If we do not get an answer soon, the prospects for preventing the spread of infection and development of the disease among those already infected will be gloomy.

In the last 10 years the World Health Organization, WHO, has attempted to get the developed, rich part of the world's researchers to become interested in the major neglected tropical diseases. This has provided us with new knowledge, not only to the benefit of the millions in developing countries who suffer from these diseases (and those Europeans and others who are infected during stays in the tropics), but also to the benefit of ourselves. We have gained significant new knowledge of basic disease mechanisms for non-tropical diseases also, for example, arthritis diseases and allergy diseases, by studying the immune system's reactions to exotic parasites.

Denmark is holding its own finely as far as financial contributions to WHO's tropical disease research program are concerned. In the first six years we have given more than the USA, England and France--combined! Over 250 million kroner to date. Unfortunately, Danish researchers have only to a very limited extent gotten a share of this money. The valuable Danish tropical disease

research which has originated in recent years has had straitened circumstances because of a lack of international contacts or foresight by the appropriating authorities--and by researchers themselves. We obviously prefer to send our contributions to other countries' laboratories.

AIDS research in Denmark is becoming internationally recognized, but here too an understanding of the need of supplying research with the most necessary money has been lacking. It is becoming tempting for a young researcher to go abroad, who mostly has to use his time here at home to fight for money to finance his projects.

Has not the time come for a highly developed country like Denmark to become conscious of its role as an equal joint-effort partner in research and the fight against the major infectious diseases which threaten the world's and our own health?

Both in AIDS research and in tropical disease research there is a need for simpler, less expensive and more precise methods for the detection of germs themselves or antibodies against them. Access to high technology and specialized knowledge are required for this. This is true also for the development of a simple antibody method for the detection of the AIDS infection in an African village. It is now possible to detect antibodies of some parasites by a simple "blotting paper" method. A couple of drops of blood on a piece of filter paper are enough for antibodies of, for example, malaria and measles, to be able to be detected by sensitive methods, which, among other things, has been demonstrated by Danish researchers.

Advanced basic and purposeful laboratory research must go hand in hand with epidemiological research on a down-to-earth plane in the field, across professional and geographical boundaries.

Coordinated research on tropical infections and AIDS will be less expensive and will produce more valid results than isolated research.

An obvious example is the recent recognition of the fact that false positive AIDS antibody tests--which are far more frequent than genuine positive tests in Africa--are perhaps associated with widespread malaria.

We should also be able to afford here at home a coordinating agency for research into global health problems and an institute which is occupied with research both on AIDS and tropical diseases.

At least there should be money for and interest in supporting, for example, Danish missionary physicians in Central Africa, who via their thorough acquaintance with local disease patterns, manners and customs can provide us some of the most important information regarding AIDS' natural history--for the least money, just as Dennis Burkitt could when he charted the form of cancer which now bears his name. Unfortunately most physicians in the tropics have enough to do caring for the innumerable patients who are suffering from other infectious diseases.

Wholehearted support from our privileged society is necessary if we are to get further both in AIDS research and in combating other serious infections which still make WHO's goal of health for all by the year 2000 utopic.

Each AIDS patient here at home costs one million kroner to care for until he/she dies. Every year one million children die in Africa from malaria.

Can we afford to and do we have the conscience to refrain from going more actively into AIDS and tropical disease research?

8831

CSO: 5400/2538

DENMARK

BRIEFS

INCREASED AIDS RESEARCH FUNDING--The government will appropriate six billion kroner more for AIDS research, Education Minister Bertel Haarder (Liberal Party) reported on Friday. It is a petition from the Medical Research Council which got the government to cough up with a larger appropriation for research on the serious disease. "And the money will not be taken from other research projects. It is accordingly a question of an increase in the total research budget," the education minister assures. "The size of the amount was decided by the Medical Research Council, and that it is not larger is because other research fields also need support," Bertel Haarder said. [By RB] [Text] [Copenhagen INFORMATION in Danish 5-6 Apr 86 p 20] 8831

CSO: 5400/2538

DENMARK/GREENLAND

SENIOR MEDICAL OFFICIAL DISCOUNTS REPORTS OF WIDESPREAD AIDS

Copenhagen BERLINGSKE AFTEN in Danish 4-10 Apr 86 pp 1, 2

[Article by Øjvind Kyrø: "Relief in Greenland: Greenland Is Not Infected with AIDS"]

[Text] Everyone feared that an AIDS epidemic would devastate Greenland when it was learned that three Greenlanders carried the virus. But a major study of the high-risk group shows that no others have been infected.

Assistant Surgeon General Jens Peter Brandstrup breathed more easily after he had received on Tuesday in Nuuk the long-awaited report from the State Serum Institute in Copenhagen: None of the 1570 people who were examined in Greenland carry the AIDS infection.

Both Home Rule Government President Jonathan Motzfeldt and Greenland Minister Tom Høyem, by the way, almost panicked when it was learned in October of last year that three homosexual Greenland men carried the fatal virus in their blood. All three had been infected in Denmark and since then have received precise instructions on how they are to avoid infecting others.

In consideration of the fact that the incidence of venereal diseases in Greenland is 100 times higher than in Denmark, politicians and health authorities feared the worst and for this reason a major study was begun to find out how widespread the infection was.

Blood tests were taken of the 1570 Greenlanders who visited clinics for venereal diseases to be examined for gonorrhea or syphilis. A small number, 78 people, said no thank you to being tested for AIDS antibodies.

The samples were flown to the State Serum Institute's new AIDS laboratory in Amager, where it was ascertained that 18 had syphilis--which is a normal number for the time of year--and that none had the feared AIDS antibodies in them. Only two of the tests were doubtful. "We judge them as negative, but for safety's sake we are doing them over," says Chief Physician Nils Strandberg Pedersen of the Serum Institute's department of treponematosi, which is medical Latin for syphilis.

"It is the right risk group which we studied in Greenland," Strandberg Pedersen says about the good 1500 people examined, who consist mainly of young urbanites. "But it is not my impression that sexual activity in Greenland has declined because of the AIDS danger," the chief physician says, with reference to the constant number of syphilis patients.

"It is nice that a high-risk group like this one has not been infected," Greenland Assistant Surgeon General Jens Peter Brandstrup says, who announces that in a year's time the study will be followed up by a new one.

The Danish health authorities are also relieved: "It is a gratifying result," Chief Physician Michael von Magnus of the Health Administration says. "But the risk of spreading to heterosexuals is greater than it is in Denmark. If the AIDS virus is introduced here it will result in immensely serious problems. Therefore, we should not fail to continue the information campaign which is under way in Greenland regarding how to prevent the disease."

Fight Over Every Krone

A study which was carried out in the late summer of 1985 at Hvidovre Hospital will soon be published in Denmark. Here 101 prostitutes from Greater Copenhagen massage parlors were examined and Physician Kim Krogsgaard reports that none of them had AIDS antibodies in them, and that the number of them who previously have had syphilis corresponds approximately to the incidence in the rest of the Danish population, i.e., two cases out of 101 examined. "It is surprising that there are not more cases in a group with so many sexual contacts," Kim Krogsgaard says.

But the situation is different and gloomier when it concerns narcotics addicts who practice prostitution. In the recently appearing issue of UGESKRIFT FOR LÆGER [DOCTORS' WEEKLY], it is recorded that in 1983 none of the narcotics addicts examined carried the AIDS infection, but in 1985 the figure was 33 percent; 9 out of 27 narcotics addicts examined were infected. Of the five women, four of them were prostitutes. "With the large number of sexual partners these narcotics addict prostitutes have it can be feared that a diffuse and uncontrolled spread of the LAV/HTLV-III infection (the AIDS virus (ed.)) can take place out in the heterosexual population," the article's 11 authors conclude.

In an editorial in the weekly it reads, in light of estimates that there will be 1000 to 2000 new AIDS patients over the next three to five years: "In consideration of what enormous sums are at stake in the hospital system, it is strange that it has been--and still is--so difficult to get funds released for prevention of the sexually transmitted AIDS infection, which is by far the most important for the spreading of the epidemic. Here at home there has been a fight, so to speak, over every single krone to be used to fight the epidemic."

According to the present plans, 80 percent of the total outlays for the AIDS epidemic are to be used to treat patients, while less than 5 percent are to be used to prevent the remaining 95 percent of cases.

FINLAND

MINISTER COMMENTS ON NEW CONTAGIOUS DISEASES LAW

Helsinki HUFVUDSTADSBLADET in Swedish 19 Apr 86 p 7

[Article by Tommy Westerlund]

[Text] The deadly disease AIDS is not referred to specifically in the new contagious diseases law which will take effect as of 1987. The Ministry of Social Affairs and Health does not find that any special provisions should be adopted, as far as AIDS is concerned.

Many feared contagious diseases have, in time, disappeared from our country. Nevertheless, it is still important to be on one's guard, which, for example, was proved by the polio epidemic a couple of years ago. One has to be constantly prepared to fight contagious diseases.

In addition, several previously unknown contagious virus diseases have been encountered. In this context, AIDS is the foremost example.

Yesterday, the government presented parliament with a bill governing contagious diseases. The purpose of the new legislation is to unite the efforts to combat contagious diseases.

At present, provisions regarding contagious diseases are included in a large number of laws and statutes. Today, these diseases are referred to and discussed in the Public Health Act, the Immunizations Act, and special enactments governing tuberculosis, venereal diseases and cholera.

AIDS

No special provisions have been included in the text of the law regarding AIDS, which probably is the disease that is the most discussed today. Finland is thus not following the example of Sweden, which has prepared provisions which make it possible to commit and isolate persons with the disease.

According to the Ministry of Social Affairs and Health in this country, it is primarily for other reasons that certain AIDS patients are committed in Sweden. It is more or less a question of narcotics addicts who also need other care.

"Coercive measures have but little significance, as far as Aids is concerned, and may even be harmful if persons infected with AIDS dare not seek help for fear of commitment or isolation," says Minister of Social Affairs and Health Eeva Kuuskoski-Vikatmaa.

"No lasting results are achieved with commitment and isolation since the disease cannot be cured. A person who has been infected with the disease will carry the virus for the rest of his life, and nobody can be excluded from the society for life."

"On the other hand, more resources ought to be granted for dissemination of information on the disease and improving the research on the virus," she points out.

Three Groups

The new law divides contagious diseases into three groups. Dangerous contagious diseases, notifiable contagious diseases and other contagious diseases.

Under dangerous contagious diseases are such contagious diseases that spread at an almost explosive rate and cause many deaths or have permanent effects. Such diseases are, for example, cholera, polio, the plague, syphilis and tuberculosis.

Notifiable diseases are such contagious diseases, the spread of which can be, and ought to be stopped by referring disease carriers for examination. Under this group are diseases which primarily are spread through sexual contact.

HTLV-III Should Be Reported

The government proposes that HTLV-III, thus the AIDS virus, Chlamydia infections and gonorrhoea should be classified as diseases that should be reported. Each time a physician observes these diseases, he ought to make a report to the authorities, which, in turn, will have to adopt measures to prevent the spread of the disease.

The classification of contagious diseases is made through various orders, so that it may be more easily changed when needed.

Immunizations

Contagious diseases will also in the future have to be fought primarily by way of dissemination of information and preventive measures, especially immunizations. The law therefore also contains provisions regarding compulsory immunizations. According to the bill, the government may make decisions concerning obligatory immunizations when necessary.

The law also provides possibilities for other compulsory measures, such as isolation, health examinations, commitments and restrictions regarding work.

Such measures will, however, only be resorted to in extreme emergencies. Persons who have become infected with dangerous contagious diseases may be

isolated, for example, if he refuses to subject himself to measures that are necessary to prevent the spread of the disease, thus if he refuses to be committed.

Such compulsory measures are very rare with us; in general, people take a positive attitude to the restrictions that are needed to stop the spread of an epidemic.

7262

CSO: 5400/1540

GUYANA

BRIEFS

MALARIA OUTBREAK--There is an outbreak of malaria affecting 400 families in Bonasika Creek. It is reported that 3 persons have died so far. The health authorities have been informed but no health official has yet visited the area to assess the situation. In the current debate on the budget speech, UF and PPP speakers pointed to the return of malaria. Dr Van West Charles, Health Minister, said it was happening in many countries. He said malaria was never wiped out from Guyana, only from the coast. Mrs Jagan (PPP MP) said, "I challenge that." WPA's MP has been asked to make representations and will do so today. [Text] [Georgetown OPEN WORD in English 10 Mar 86 p 3] /9317

CSO: 5440/082

HONG KONG

BRIEFS

MOSQUITO MALARIA THREAT—Mosquitoes at home and abroad are a danger to Hongkong people, according to the Medical and Health Department. Over the past three years the number of imported malaria cases has risen from 94 in 1983 to 162 last year. People traveling through Hongkong from countries where malaria is endemic—including China, India and Pakistan--make up most of the victims recorded in the territory. "There is a great risk of malaria parasites being brought in by travelers from malaria endemic countries," said a department spokesman. Only a fraction of the cases reported in Hongkong are due to the anopheline mosquitoes which breed in parts of the New Territories near the closed border areas. Visitors to the New Territories should take repellent sprays and mosquito nets if they plan overnight trips, the department advises. "But the best preventive measures would be to stop mosquitoes from breeding," said a spokesman. [Text] [Hong Kong SOUTH CHINA MORNING POST in English 7 Apr 86 p 23] /9317

CSO: 5440/079

INDIA

SCIENTISTS DEVELOP NEW ANTIRABIES VACCINE

New Delhi PATRIOT in English 25 Apr 86 p 4

[Article by V Lalitha]

[Text]

India will soon start production of a new inactivated anti-rabies vaccine based on research work carried out at the Pasteur Institute of India, Coimbatore in Tamil Nadu. This vaccine, more efficacious and with various clinical properties, will completely replace the carbollised anti-rabies vaccine used at present in all rabies cases in the country.

India today needs on an average about 3.5 million doses, each of 10 ml, of anti-rabies vaccine a year, and according to scientists at the Haffkine Bio-Pharmaceutical Corporation Limited, a Government of Maharashtra Undertaking and a major producer of the carbollised anti-rabies vaccine in India, the entire needs of the country are met by indigenous production.

The regular production of the new vaccine, developed on the basis of tissue culture from a special strain of the rabies virus, will commence within the next three to five years. Within a period of eight years the entire requirement of the country would be met by the new vaccine.

A definite advantage of the new vaccine is that it is less painful in administration. Also, it is more effective, less toxic and only a small quantity is required to be injected

in a lesser number of doses. It can be used in preventive as well as curative therapies.

"The research in tissue culture at the Pasteur Institute is in progress and once this technique is standardised, the know-how will be shared with other vaccine producers in the country, enabling a concerted production drive", said Dr P L Saldanha, general manager of the Haffkine Bio-Pharmaceutical Corporation.

The carbollised anti-rabies vaccine is produced from the brain of sheep. The attenuated rabies virus is injected into the brain of sheep and allowed to grow there. After a specific period, the infected brains are removed and processed to obtain a 5 per cent suspension. The suspension is then treated to make it render immunity when used on humans and not cause rabies.

Recently the inactivation process was changed to the BPL (Beta Propiolactone, a chemical) process in order to increase production of the vaccine. However, the acute shortage of BPL prevented the process being completely adopted

at the vaccine producing centres.

The carbollised anti-rabies vaccine is administered only as curative therapy. It is normally given as subcutaneous injection on the abdomen, for 14 continuous days in case of serious dog bites, or in lesser doses, depending upon the nature of injury and age of the victim. The administration of the vaccine is painful and with rare cases of reported side-effects. The cost of one dose (10 ml) of the vaccine is around Rs 20, but it is normally given free of cost in Government-run hospitals.

The new vaccine is effective both in preventive and in curative therapies. In preventive therapy two subcutaneous injections of one dose (two ml) are given at intervals of one month. Normally after these two injections, most of the patients acquire antibodies to neutralise any rabies virus. A booster dose of two ml is given after about one year. The immunity after this course is found to last for several years.

In curative therapy, subcutaneous injections are given on the day of bite or the nearest possible day, on the third day, on the seventh day and on the 14th day, followed by boosters on the 30th and 90th days. Persons who have taken vac-

cines earlier have to take reduced number of injections depending on the antibodies control. The new vaccine can be administered by deep subcutaneous route in the arm, in the deltoid zone or through intra-muscular route in the upper external quadrant of the buttocks.

The carbimised vaccine is at present produced by government and public sector units including the Haffkine Bio-Pharmaceutical Corporation, the Central Research Institute, Kasauli, the Pasteur Institute and the Vaccine Institute, Baroda.

Some private sector pharmaceutical companies import anti-rabies vaccine produced under the tissue culture process using living cells, including human diploid cells as the medium. The cost of the two ml vial of the imported vaccine is around Rs 200.

Says Dr Saldanha: "Once the Concor project succeeds, the new vaccine can be produced on a mass scale by various government and public sector units to meet the needs of the country". He also hopes that this would not only make India self-sufficient in anti-rabies vaccine, but would also save foreign exchange by way of import substitution.

/12828

CSO: 5450/0135

INDIA

FIRST AIDS CASES DETECTED IN TAMIL NADU

Madras THE HINDU in English 30 Apr 86 p 1

[Text]

NEW DELHI, April 29.

The dreaded AIDS (Acquired Immune Deficiency Syndrome) disease has come to India and the first few cases have been detected in Tamil Nadu. This startling information was given by the Union Health Minister, Mrs. Mohsina Kidwai, this evening in both Houses of Parliament.

Promiscuous behaviour: According to the Minister, nation-wide surveillance studies initiated by the Indian Council of Medical Research had shown that six women in Tamil Nadu, known for promiscuous heterosexual behaviour, had been infected.

The Minister, however, did not give details of the place where these cases were detected.

Mrs. Kidwai assured the House that the situation was under close and constant surveillance. The ICMR, she said, had already established AIDS surveillance centres in seven cities—Pune, Vellore, New Delhi, Delhi, Srinagar, Madras and Calcutta. The number would be immediately increased to cover all parts of the country. Eventually, one centre would be set up in each state. A separate cell was being established in the Directorate-General of Health Services. It would work in close liaison with the cell already functioning in the ICMR.

Awareness campaign: An intensive education campaign about the nature of AIDS infection was being mounted. The medical profession was being mobilised along with the public

through nationwide campaigns. Scientific institutions had been identified and were already engaged in work leading to the identification of the virus in precise terms. At the same time, the six cases identified were being treated to ensure that the infection did not spread.

No import of uncertified blood: Mrs. Kidwai said instructions had been issued to stop the import of blood and blood products without certification of freedom from AIDS contamination. Advance action had been initiated to have Indian scientists trained in the sophisticated methods of investigating this disease. It would no longer be necessary to have confirmatory tests done abroad.

The Prime Minister, Mr. Rajiv Gandhi, who made a mention of this at the National Development Council meeting, exhorted the Chief Ministers to be careful and take necessary steps to contain it as early as possible.

Traced to vigilance home

Our Madras Staff reporter writes:

Enquiries in Madras show that the AIDS cases have been traced to a vigilance home in the city. The State Government has been quietly studying the cases of 107 women inmates of the home for the past three months. Blood samples were taken and sent to Vellore, Delhi and other places for examination. The presence of AIDS infection was suspected in six of these cases, it is reported. The issue is expected to figure in the State Assembly tomorrow.

/12828

CSO: 5450/0136

INDIA

PAPERS REPORT MEETING OF TUBERCULOSIS GROUP

Efforts To Detect

Bombay THE TIMES OF INDIA in English 20 Apr 86 p 8

[Text]

NEW DELHI, April 19: The tuberculosis Association of India has set for itself the target of detecting 1.4 million new TB cases in 1985-86. Detection in the rural areas in particular will be speeded up.

Community health workers and health guides in villages are being encouraged to detect and bring suspected cases to centres where they will be treated. Control and elimination of tuberculosis is considered vital to achieve the "health for all" target by the year 2000.

At the annual general meeting of the association it was pointed out that there were about ten million TB cases in the country of which about 25 per cent were infectious. Every three to five years, TB surveys are conducted in Bangalore, Delhi and Thiruvellur in Chinglepet district of Tamil Nadu. About 1.5 per cent of the population is found to be afflicted with the disease.

Dr. M. D. Saigal, chairman of the association, said TB was not on the increase but far greater control of the disease was needed. The mortality rate had dropped from 300 to 40 to 60 per 100,000 population. There was also a definite change in the pattern of the disease. Whereas earlier very young people were contracting the disease now people over 40 were more susceptible to it.

Despite the earlier controversy about the need for BCG vaccination, the association feels it is vital because it does give a certain protection from the disease.

The Maharashtra Anti-TB Association was awarded the Khushi Ram shield for outstanding performance. The Andhra association has won the award for general activities and the Tamil Nadu and Kerala association for the TB seal campaigns.

Situation in Delhi

New Delhi PATRIOT in English 19 Apr 86 p 3

[Text]

Over 80,000 persons in Delhi have been found to be suffering from tuberculosis and at least 20,000 need urgent medical treatment, according to an ongoing survey of the TB Association of India.

The figures on TB incidence in Delhi was revealed by the Association's technical advisor Dr S R Pamra, who said at least 20,000 cases were infectious and needed to be segregated.

The ongoing survey has further revealed that of the massive figure, only 35,000 cases, from different parts of the Capital, were actually under treatment, while only a mere 12,000 patients had been diagnosed. Over 50 per cent of the TB patients were described as "unknown" as they had not been diagnosed.

In a bid to detect and treat TB

patients in Delhi the Association, an autonomous body, kept over 30,000 persons in the Jama Masjid area under surveillance since 1962 and found that out of every 100 TB patients, only 33 were females.

Talking to newsmen, Dr Pamra spoke of public ignorance and said that recently it was found that of the total number of "suspicious cases" of TB, only a mere 20 per cent were going to the New Delhi TB Centre, while the rest went to private clinics and hospitals to finally return to the clinic 18 months later.

Target sections: Speaking of the poor in India being the target of TB, Dr Pamra quoted a twenty-year old survey stating that over 50 per cent of class four employees of the Central Secretariat had been found to be afflicted by the disease.

"The situation has not changed much", he said adding that in poor houses and mental asylums TB was found to be more prevalent than in other pockets of the city.

The Association authorities said that the target of the national TB policy was to vaccinate urban newborns with BCG within three days of birth, while in the rural areas the target was one year after birth.

The technical advisor has warned that the tuberculos bacillus can stay alive for six hours in direct sunlight after leaving the mouth of the patient. In dark areas the bacillus can remain virulent for even a fortnight.

The health authorities were diagnosing about 1.3 million persons a year in India. Some 2.5 million fresh cases were coming up in the period leading to an evergrowing backlog, because of the lack of health education and shortages in medical and human resources, Mr Pamra pointed out.

At the TAI's 47th annual general meeting on Friday, the experts stressed on the need for integrated health units to tackle the TB menace in India.

Dr Pamra said that about 1.47 per cent of the Indian population suffered from the dreaded disease, meaning that there were some 10 million patients spread over 490 Indian districts of which 364 districts were under the care of TB experts and workers.

The TB Association has submitted a Rs 140 lakh proposal to fight tuberculosis.

/12828

CSO: 5450/0134

11 June 1986

IRELAND

HIGH RATE OF TB QUESTIONED, MAY BE PASSED ON TO CATTLE

Dublin IRISH INDEPENDENT in English 23 Apr 86 p 3

[Article by Gerry Mulligan]

[Text] HIGH incidence of TB among Irish people may well account for the continued existence of the disease in the national cattle herd — with humans transmitting it — a seminar was told yesterday.

A British expert on bovine TB, Mr. C. H. Collins, pointed out that at present there is a high degree of infection among Irish people which is largely undetected.

The paper read by Mr. Collins to the Dublin seminar on "Animal Health: THE Control of Infection," may cause some controversy in view of the Government's cash-cuts which have hit the cattle TB testing programme.

Constant testing is one of the most effective ways of controlling it, Mr. Collins

stressed, speaking after his lecture at the Royal Irish Academy.

The continued high levels of TB in cattle is probably due to the presence of the disease among people who are capable of transmitting the disease onto animals," Mr. Collins pointed out.

Animal husbandry and welfare is very good in Ireland, making it difficult to understand why TB has not been eradicated here when it has almost being wiped out in the U.K., he added.

"I believe there is a lot more TB among people in Ireland," he said. The considerable degree of cattle movement in Ireland also helps to spread the disease.

Mr. Collins also questioned whether recent claims about badgers as being among the main TB carriers were well founded.

/13104

CSO: 5440/080

KENYA

HIGH INCIDENCE OF HYDATIDOSIS IN TURKANA DISTRICT REPORTED

Lusaka ZAMBIA DAILY MAIL in English 19 Apr 86 p 4

[Article by Hadara Tsefay]

[Text]

LOOKING at her belly, you would not have doubted the woman was eight months pregnant, except for the wrinkles on her face, which were those of a grandmother.

She was elderly alright, but not pregnant. She suffers from hydatidosis or hydatid disease, a common ailment among the Turkana people of north west Kenya.

The Africa Medical and Research Foundation (AMREF) is concentrating on a programme on the control of hydatidosis in the Turkana district.

To provide health services to rural folk, Amref has been working to combat hydatidosis in Turkana for several years. The prevalence of the disease in the area was noted by Amref scientists in 1958.

The occasional occurrence of the disease has been recorded in other parts of Kenya as well. Its incidence in the country was first reported in 1915.

The cycle of Hydatidosis at the primary level is between wild carnivores and

wild herbivores. The secondary cycle is in dogs and other domestic animals. Animals like lions, jackals, hyenas, cattle, sheep, goats, camels, and human being are also hosts of the disease. The main source of infection for human lies in the domestic circle.

Hydatid disease is caused by the tapeworm of dogs through the larval stool of the parasite taeniid *Echinococcus granulosus*. Human beings get infected when they eat the worm of the parasite through contaminated food or water.

The parasite enters the human body where it forms a cyst of up to 20cm diameter, mostly in the liver and lung. Children are more vulnerable to the disease due to frequent contact with dogs.

The infection is unspecific in the beginning but the body swells later as the cyst enlarges. The cyst in human is single while in animals is multiple and found in more than one organ.

According to the study conducted by Amref researchers, the prevalence

of hydatidosis in Turkana is two cases per 1,000 people annually. In cattle, sheep and goats it is 2 out of a 100 and in camels is 80 out of a 100 in the respective animal groups.

The incidence of the disease, particularly in Lokichogio and Lodwar — currently control areas — is said to be the highest in the world. About 5 per cent of the human population in the two areas is infected by the disease.

The prevalence of the disease in Turkana is due to the large dog population which is estimated at 50,000. The living conditions of the people, who are mostly nomadic pastoralists, is another factor.

Turkana is a district usually stricken by drought every five to 10 years. The human and livestock populations which perish from famine offer dogs easy access to the infected carcasses. Under these circumstances the rate of infection of dogs may rise up to 70 per cent.

It is worth mentioning that the Turkana do not bury their dead hence the dead are eaten by dogs and

wild animals. This is another contributing factor to the prevalence of the disease in the area.

Hydatidosis, which is of major economic and medical significance throughout the world, is common in the northern part of Africa particularly Tunisia, Libya, Morocco, Algeria and Egypt. Its incidence is high in livestock and very low in humans.

In the neighbouring countries of Kenya, people living under the same conditions as the Turkana are most likely to experience hydatid disease.

In the neighbouring countries of Kenya, people living under the same conditions as the Turkana are most likely to experience hydatid disease.

Countries like Austria, New Zealand, Tasmania, Cyprus, Argentina, Uruguay, Falklands, who mostly engage in livestock breeding, have minimised the scourge of the disease through effective treatment and intensive educational programmes.

Hydatid disease has grave consequences on the economic development and human existence of any country. High cost of treatment, loss of income and productivity, incapacity to work, disability and death follow infection.

In view of the seriousness of the problem, Amref launched a hydatidosis control programme in Lodwar and Lokichogio areas of Turkana district.

The programme, which is financed by Leverhulme Trust UK, the European Economic Community (EEC), Amref-Germany and the Australian government have various objec-

tives. One is to carry out epidemiological studies into hydatid disease using parasitological, serological, immunodiagnostic and radioserological techniques which could be replicated in similar areas affected by the disease.

Another is to determine the recurrence rate of treated cases. The third is to develop and implement a control methodology in a select pilot area in collaboration with government authorities. The next is to evaluate the impact of the control programme and to assess its potential and appropriateness for replication in other areas.

Since 1976, survey and data compilation were carried out by Amref in select areas of Turkana. The actual control programme started through sensitization and medical treatment in 1983. In the same year a medical research laboratory was opened at Lopading. A similar facility was recently introduced to Lokichogio, with the aim to speed up the fight against the disease.

As part of the control programme health education on the prevention of the disease is conducted among the Turkana. The methods used to disseminate the information and education to the illiterate are regular talks, audio visual and film shows.

Former hydatid patients are also used to educate their families by sharing ideas and experiences acquired during the course of the illness and treatment.

The programme to control hydatidosis will also focus on the mass elimination of unwanted dogs in

Turkana, who are the major carriers of the disease in the area. Only the wanted dogs will be registered and fleated every six weeks with plarifuontel.

Hydatid suspects are screened using modern instruments such as ultrasound. It is only on confirmation of the disease that the patient undergoes operation at a nearby hospital. Serious cases are flown to the Kenyan capital, Nairobi, by Amref aircrafts.

Since the early 1960s Amref doctors have performed operations on over 1,600 hydatid patients in Turkana.

Hydatid victims are treated by surgery, but it is expensive and the services do not reach all those who need them. Besides, post-operative recurrent cases are increasing, and in most cases inoperable.

A recent trend is to treat the patient with the drug Albendazole. A study to use this medicine is underway for wider use.

Despite Amref's enthusiastic dedication to the programme, existing socio-economic factors in Turkana continue to hinder the smooth implementation of the programme.

The nomadic nature of the tribe, a poor communication system, high illiteracy rates, very limited facilities, and the large number of dogs are some of the major obstacles for the rapid control of the disease.

With this in mind, the locals are working with the government and non-governmental organisations in determined efforts to control, and if possible, eradicate the disease in future. — APS Feature.

MALAYSIA

MINISTRY ISSUES WARNING ON EXPECTED DENGUE EPIDEMIC

Anti-Epidemic Committee on Alert

Kuala Lumpur NEW STRAITS TIMES in English 24 Apr 86 p 7

[Text]

KUALA LUMPUR, Wed. — The Health Ministry has put the national and State anti-epidemic committees on the alert in anticipation of a major dengue fever (DF) and dengue haemorrhagic fever (DHF) outbreak in the country.

The director-general of health services, Tan Sri Dr Abdul Khalid Sahan, said today the Ministry had issued directives to the committees to be on the look-out for dengue fever and dengue haemorrhagic fever cases and to take remedial actions.

He said the Ministry would work closely with the local, town and municipal councils in monitoring the situation and urged the local authorities to cooperate.

The Ministry would focus attention on the heavily populated areas, especially squatter areas where outbreaks were most likely to occur.

Tan Sri Khalid also advised the public to destroy suspected mosquito breeding areas and to keep the houses and compounds clean.

Meanwhile, a Ministry official said a total of 199 cases of dengue fever and 72 cases of dengue haemorrhagic fever with six deaths had been reported throughout the country so far this year.

Of the total, 183 cases of DF and 66 cases of DHF were reported in Peninsular Malaysia while six DF and 18 DHF cases were reported in Sarawak.

Of the number of deaths, four were recorded in the Federal Territory and one each in Selangor and Pahang.

Last year, 354 cases were reported in the country, of which 242 were DF and 112 DHF cases with 11 deaths.

— Bernama

Paper Views Problem

Kuala Lumpur NEW STRAITS TIMES in English 23 Apr 86 p 8

[Text]

Everybody took seriously the prediction of the return of Halley's comet which was last seen 76 years ago, but few Malaysians seem to be prepared to give any credibility to the warning of the imminent return of the dreaded disease DHF (dengue haemorrhagic fever) and its less virulent cousin DF

(dengue fever). The epidemic, expected in July or August, could be as severe as the last major episode in 1982 when 35 people died and 3,000 others were struck by it. The public has been given notice, several times these few months, to expect the disease to make a reappearance this year, a prediction made on the basis of records which show it returning with vengeance every four years since 1974. In that year, the disease was responsible for 104 deaths. It's now been four years since the last major appearance and the possibility that it will strike hard again is sending shivers down the spine of those responsible for its prevention, management and control.

Health authorities in the more disease-prone areas have been on full alert and have stepped up their efforts to educate the public while continuing to deprive the aedes mosquito of breeding places through a systematic programme of fogging and enforcement of the relevant legislation. But what is worrying is the complacency of the public. According to reports, nearly 4,000 homes were found to have played hosts to the disease carriers in the month of March alone. When will the message ever sink in?

But what is probably more troubling is the attitude of private practitioners who have a vital role to play in the pre-

vention of an outbreak. According to the World Health Organisation's Collaborating Centre for Arbovirus Reference and Research, doctors are not helping it in its attempt to break the chain of transmission. Its director, Associate Professor S.K. Lam, has described as "a worrying trend" the reluctance of some doctors to notify the Health Ministry of suspected cases of DHF. According to him only 50 per cent of laboratory confirmed cases are not notified and those who do inform, do so too late. This renders ineffective measures that could otherwise have been taken to control the vectors. Only if all doctors play their part can the centre's sentinel network of general practitioners be capable of acting as an early warning system.

General practitioners quite understandably would not want to create panic among their patients, something which they would not be able to avoid if they were to take blood samples from every suspected case. Also not every doctor will agree with Assoc. Prof. Lam that it is better to over-report than to under-report. Patient sensitivities must be considered as much as the needs of the WHO centre. This problem can be easily solved if there are frank and open discussions between those who are supposed to collect the data and those who analyse them.

MALAYSIA

MINISTRY OF HEALTH EXAMINES HEPATITIS B PROBLEM

Kuala Lumpur NEW STRAITS TIMES in English 25 Apr 86 p 1

[Text]

KUALA LUMPUR, Fri. — The Ministry of Health is taking steps to identify the extent of Hepatitis B infection in the country and prevent its spread, Minister Datuk Mak Hon Kam said today.

He said the prevalence of the infection in the country at present varied from 3.5 per cent to more than 10 per cent of the population.

Hepatitis B is associated with the more severe, acute syndrome of debilitating, chronic liver diseases and liver cancer.

Speaking at the seminar on "Recent Developments in Hepatitis B", he said one of the steps the Ministry had taken to check the spread of the infection was setting up more centres to screen blood donors.

"The Ministry has already screened blood donors for Hepatitis B virus because it is a disease that can be transmitted through blood and blood products," he said.

Datuk Mak said this service was being offered at the 17 regional centres for screening AIDS antibodies.

Control strategies

"The Ministry of Health has also set up an advisory and scientific committee on viral Hepatitis B in order to review problems of the disease."

He said the committee was responsible for identifying high risk groups and recommending suitable control strategies.

There were an estimated 200 million carriers of the Hepatitis B virus in the world, with the rate as high as six to 10 per cent in South-East Asia alone.

Datuk Mak said the Ministry was working closely with the World Health Organisation in developing control strategies for Hepatitis B.

A vaccine has been developed to eliminate the spread of infection from carriers to susceptible persons.

"Although control programmes of Hepatitis B are very expensive, we will leave no stone unturned in our efforts to ensure that the programmes are effectively implemented in the country," he added.

The one-day seminar was organised by the Malaysian Society of Medical Laboratory Technologists. — Bernama

NEW CALEDONIA

BRIEFS

LEPTOSPIROSIS DEATHS--Four leptospirosis deaths have been reported since the beginning of April making a total of nineteen since the beginning of the year. At this rate 1986 will equal the 50 deaths reported for the period of 1 May 1983-1 May 1985 which averaged out to 25 deaths each year. The increased death rate is particularly marked in April and is attributable to seasonal causes. [Excerpt] [Noumea LES NOUVELLES CALEDONIENNES in French 17 Apr 86 p 2] /12858

CSO: 5400/4377

NICARAGUA

3,000-5,000 CASES OF MOUNTAIN LEISHMANIASIS REPORTED

Managua. FT. NUEVO DIARIO in Spanish 6 Apr 86 p 4

[Text] The Ministry of Health with the support of the Franco-Nicaraguan Scientific Committee will conduct a pharmacological study this year to learn about the types of leishmaniasis or mountain leprosy, as it is commonly known, the dynamics of the existing transmitters in the population and the class of animals that serve as reservoir hosts for the reproduction of the insect. This terrible disease for the main part is afflicting Regions V and VI of the country.

This information was provided by Dr Alcides Gonzalez Mairena, who is in charge of the National Center of Hygiene and Epidemiology of the Ministry of Health. Doctor Gonzalez estimated that there are now between 3,000 and 5,000 cases of cutaneous leishmaniasis. He said that its presence has been detected basically in the areas of Rio Blanco, Nueva Guinea, Waslala and the Special Zones where there is dense vegetation.

Types

Doctor Gonzalez said that there are three types of leishmaniasis or mountain leprosy in our country. One of these is known as cutaneous leishmaniasis and leaves enormous sores throughout the body of affected persons. It is produced by the bite of an insect known as "Ejen" [sand fly], which develops in a life cycle similar to that of the mosquito that transmits malaria.

Mucocutaneous leishmaniasis is another form of the disease which ulcerates the mucosa of the nose, totally deforming it and making respiration impossible. A third type, which is the most serious, is known as visceral leishmaniasis. It affects the principal viscera such as the liver, the spleen, and so forth.

The official said that the study of this disease began in 1980, but owing to the lack of economic resources, the research phase could not be undertaken. Nonetheless, he added, Dr Felisa de Solano has been studying the problem since then and was able to establish contact with the French scientist Pierre Gobsjean who made great contributions to the study of the disease. He was unable to complete the study because he was killed by counterrevolutionary bands in Rancho Grande.

Donations

Nevertheless, the scientist pointed out, this major concern has become a national project, thanks to the considerable assistance of French scientists who have donated \$170,000 in medical equipment, bibliographies, and training, in addition to \$100,000 in annual donations for a period of 4 years, the time they foresee as required for the completion of the first phase of study and research.

The project also calls for an entomological study during the first research phase into the reservoir hosts or incubation deposits, as well as the installation of laboratories in the affected areas and training in the diagnosis of the disease.

In conclusion, Doctor Gonzalez said that Ministry of Health headquarters is installing the first analysis equipment that will be part of what will become the main research center on mountain leprosy.

12674/5915
CSO: 5400/2055

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN

WORLD HEALTH DAY SPEECH BY MINISTER OF HEALTH

Aden 14 UKTUBAR in Arabic 8 Apr 85 p 1

[Article: "On the Occasion of Our Country's Celebration of International Health Day, the Ministry of Health Announces the Formation of Field Teams to Immunize Children Completely"]

[Text] The Ministry of Public Health will form field health teams during the coming month of May made up of workers in the health services and students at the faculty of medicine and branches of the health institute in the provinces. The task of these teams will be to go into the field to schools, residential areas, and health organizations in the Province of Aden to immunize children completely. In addition, the Ministry of Health will prepare a study of this experiment in order to universalize it on the level of the provincial capitals of the republic.

Comrade Sa'id Sharaf Badr, minister of public health, announced this in a speech he gave yesterday afternoon at the lecture assembly held in the building of the health institute on the occasion of the celebration of International Health Day which our country celebrates annually with all peoples on April 7.

The comrade minister of public health also mentioned that the ministry will organize, in cooperation with the World Health Organization in the framework of its activities celebrating International Health Day this year, a television marathon under the slogan "Healthy Life is a Triumph for All," the topics of which will be limited to child health, the athletic youth, the health of the mother, and other health topics. These inspired our country to embody this slogan as an open call to ensure the physical and psychological health of all age categories, including nursing infants, children of kindergarten and school age, youths of university age, workers, and the elderly. He stressed the importance of combining the efforts of the workers in the health services, the agricultural, educational, industrial, commercial, cultural and informational sectors, and the mass organizations for designing and implementing educational and health education plans in order to realize the slogan "Health for Everyone by the Year 2000," the achievement of which Democratic Yemen has declared as a goal.

The comrade minister praised all the forms of assistance that the World Health Organization and the Arab and international health organizations have offered to our country.

In a speech of the World Health Organization, the charge d'affaires representing the organization in our country praised the efforts that Democratic Yemen has made in implementing the preventive care projects and programs relating to the realization of the slogan "Health for All by the Year 2000," mentioning that Democratic Yemen is in the forefront of countries endeavoring to achieve this slogan. He emphasized that the organization will continue to offer every form of health assistance to Democratic Yemen in order to fulfill this slogan.

Speeches were also given on the Women's Union of Yemen and the Yemeni Socialist Youth Union at the gathering.

Members of the United Nations, the World Health Organization, the Swedish Union of Child Care in Aden, and workers in the health services also attended the gathering.

13292/12379
CSO: 5400/4514

PEOPLE'S REPUBLIC OF CHINA

PERIPHERAL BLOOD CELLS IN EARLY STAGE EHF STUDIED

Beijing ZHONGHUA BINGLIXUE ZAZHI [CHINESE JOURNAL OF PATHOLOGY] in Chinese
Vol 14 No 4, 30 Dec 85 pp 260-262

[Article by Chen Dehui [7115 1795 5610], Yang Huibin [2799 1920 1755], Wang Guohua [3769 0948 5478], and Zhang Heqiu [1728 6320 4428], Basic Medicine Institute, Academy of Military Medical Sciences of the People's Liberation Army]

[Text] English abstract: Peripheral blood cells of seven patients of epidemic hemorrhagic fever with a clinical course of 3-11 days, respectively, were studied under transmission electron microscope. In thin sections the presence of macroplatelets is characteristic of an uneven distribution of granules interspersed with randomly arranged mazes of tubules and dilated channels. Few dense particles were seen in the dilated channels of open canalicular system of the large platelets. Degenerated platelets were occasionally found.

A number of plasma cells in different stages found in the peripheral blood simultaneously. A peculiar microtubular filamentous structure of unknown nature was found in the dilated cisterns of endoplasmic reticulum of a plasma cell.

The diagnostic significance and mechanism of the ultrastructural abnormalities of the platelets accompanied with the presence of plasma cells in the peripheral blood are discussed. [End abstract]

According to clinical observations, there is a marked decrease of platelets in the peripheral blood (generally less than 150,000/ml and less than 20,000/ml in extreme cases) of a majority of the patients with early stage epidemic hemorrhagic fever (EHF, also called hemorrhagic fever of renal syndrome, HFRS) and variant lymphocytes (exceeding 25 percent) appear in a substantial number of patients.¹⁻⁴ Li Faqing [2621 3127 0615] and coworkers have detected within the large monocytes of the peripheral blood of patients with acute EHF the antigens associated with EHF by direct immunofluorescence.^{5,6} In our attempts to investigate by electron microscopy the morphology of EHF-associated antigens or virus within the peripheral blood cells of early stage patients we discovered the ultrastructural abnormalities in platelet and lymphocyte. The results are reported here.

Experimental Procedures

Collection of Peripheral Blood Samples: 3 ml of blood were drawn from the forearm vein of the patients who were clinically diagnosed as having EHF (seven cases, one case was 3 days after onset of the disease, five cases between 5-7 days, and one case 11 days) and transferred to anticoagulation tubes containing 0.5 ml of 3.8 percent sodium citrate. Centrifugation at 3,000 rpm for 15 minutes gave a creamy yellow layer of platelets and white cells. The top layer (plasma) was recovered and a 3.1 percent glutaraldehyde solution was added slowly to prefix at room temperature for 15 minutes.

Preparation of Material for Electron Microscopy: The prefixed platelet, white cell layer was cut into 1 mm³ cubes and fixed at 4°C for 2 hours by immersing in a precooled 3.1 percent glutaraldehyde solution. After overnight rinsing in sucrose-phosphate buffer, it was postfixed in 1 percent OsO₄, dehydrated with repeated addition of ethanol and acetone, and embedded in Epon 812. Semithin sections were stained with HE and correctly localized by light microscope. After uranyl acetate and lead citrate double staining, ultrathin sections were observed on a Philips EM-400T electron microscope.

Four samples of peripheral blood from healthy individuals were collected as control and were treated similarly.

Results

Ultrastructural Abnormalities in Platelets: In the peripheral blood of the patients 3 days after the onset of EHF, there appeared many platelets with irregular shapes. They were larger (long axis exceeding 5 µm) and the cell body appeared round or rod-shaped. Most of the platelet's open canalicular system (OCS) were markedly dilated. Amorphous membranous granules of various sizes were present inside. Within the granule region, alpha-particles were either condensed or significantly reduced and their places taken up by tubular structures. Microcanalis were rarely seen and the mitochondria were tiny and scarce. The pseudopodia in the transparent region were short and fat. In a few platelets, the increase in dense tubular system (DTS) were observed.

In the peripheral blood of the patients 5 to 7 days after the onset of the disease, macroplatelets were abundant, their sizes matching that of lymphocytes and red blood cells (long axis exceeding 6 µm) (Figures 1 and 2). In the cytoplasm of macroplatelet, there were generally larger number of alpha-particles in the granule region that often clustered at the center and a thin transparent region that often contained thick extrusions. In some cells, the cytoplasm was full of large vacuoles and the membranous dense particles of various sizes were present in a small number of tubules that were dilated whereas fibrous materials of medium density were present in some large vacuoles. Furthermore, there were increased growth of dense tubules that were tightly packed into clumps, some of which fused with open canaliculi to form the honeycomb-shaped membranous complex that were distributed at the

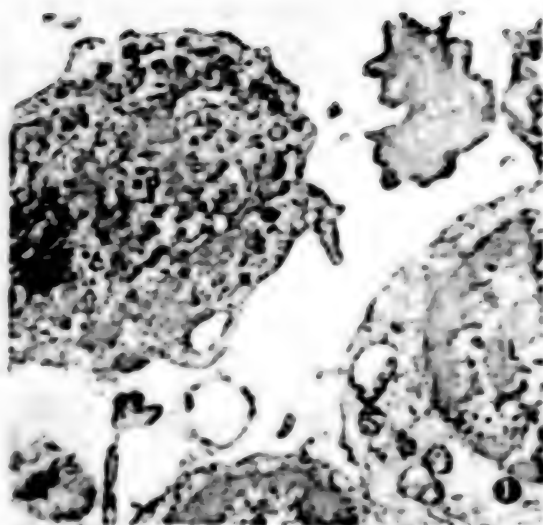


Figure 1. Macroplatelets (P) in the Peripheral Blood of Early State EHF Patients. Their sizes are close to that of lymphocytes (L). In the cytoplasm, alpha-particles are densely packed and dense particles are present in the channels of a few dilated open canaliculi (✦) x 10,000.

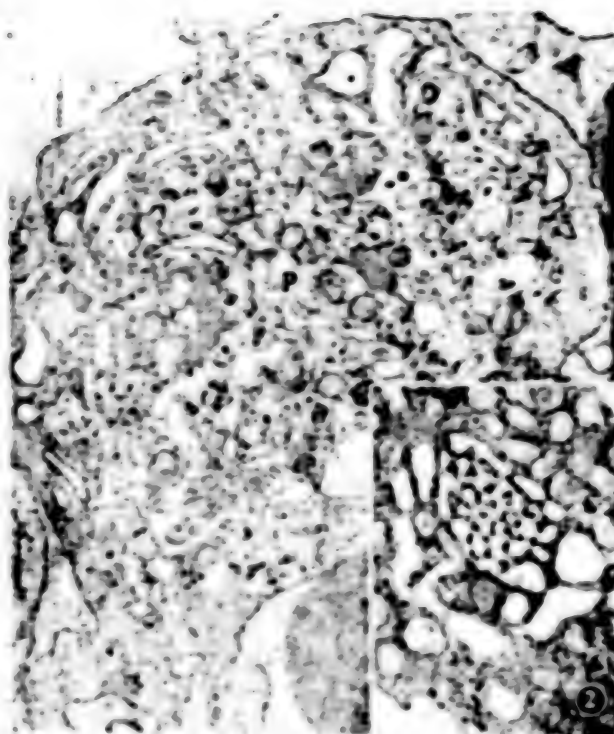


Figure 2. Macroplatelets (P) Whose Sizes Are Close to That of Red Blood Cells. The open canalicular systems increase in number and are dilated x 15,600. Inset: Honeycomb-shaped membranous complex x 20,800.

center or the border regions of the platelet (Figure 2, inset). Glycogen granules were observed to accumulate within the thick, fat cellular extrusions. In addition, degenerated platelets with alpha-particles and other organelles packed at one end while the other end became an enlarged transparent region were seen (Figure 3). In the sections of some platelets, only transparent regions and large vacuoles were present.

After 11 days of EHF, macroplatelets were still visible and an increase of tubular structures in the cytoplasm was seen. Globular, dense particles with well-defined membranes (about 100 nm in diameter) were present in each dilated sac. Other ultrastructural abnormalities of the platelets were basically the same as described earlier. Degenerated platelets were also present with the particles near the center and the transparent region



Figure 3. Degenerated Platelets (P). Alpha-Particles and Other Organelles Condense at One End and the Transparent Region Expands With the Extrusions Appear Like Vacuoles (→) x 16,300

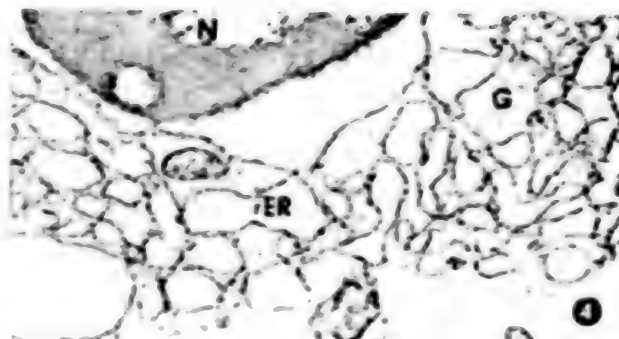


Figure 4. The Matured Plasmacells in the Peripheral Blood of Early Stage EHF Patients. There are enlarged nuclear membrane spaces and dilated cisterns of rough endoplasmic reticulum, some appear sac-like x 20,800

expanded, but the extrusions disappeared. Profiles of various morphological abnormalities of the clumping platelets could be seen.

All the ultrastructural abnormalities of platelet described above were not observed in the peripheral blood of healthy individuals.

Ultrastructure of Variant Lymphocytes: The variant lymphocytes of various shapes observed under optical microscope were found to be plasmacells at various stages of development by electron microscopy. Three days after the onset of the disease, the variant lymphocytes in the peripheral blood were mainly plasmacells at early stages of development. Heterochromatins appeared flat inside the cell nucleus and the circular rough endoplasmic reticula were arranged into laminae within the plasma. Five to seven days after the onset of the disease, the nuclear membrane spaces and the cisterns of rough endoplasmic reticulum of a majority of the plasmacells were dilated into sacs with low density fibrous materials present inside the cisterns (Figure 4). Besides, pyknotic nucleus was seen in a number of plasmacells and the Golgi bodies adjacent to these nuclei shrank. The cisterns of endoplasmic reticulum were highly dilated and fused with one another into large cavities where the fibrous materials were infrequently seen (Figure 5). This kind of plasmacells were detected in the peripheral blood 6 days after the onset of the disease.

In the only peripheral blood sample taken 5 days after the onset of the disease, the Golgi bodies adjacent to the nucleus of a plasmacell were highly

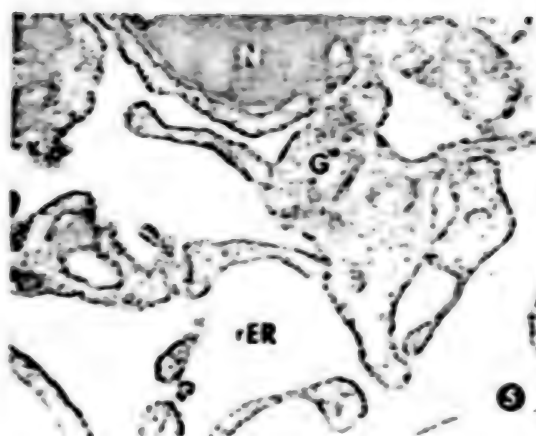


Figure 5. Plasmacells Reveal the Pyknosis of Nucleus and Shrinkage of Golgi. The cisterns of endoplasmic reticulum are extremely dilated and fused with one another to form cavities.

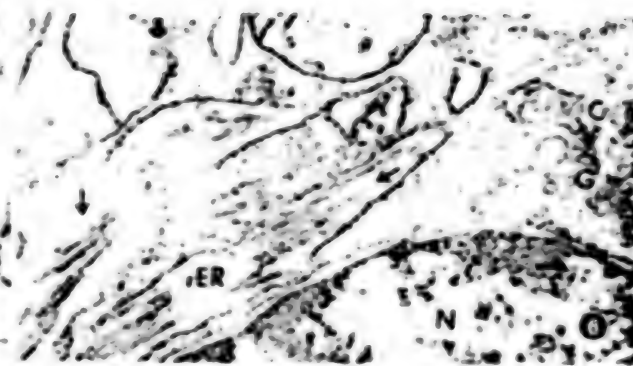


Figure 6. The Microtubular Filamentous Materials Present in the Dilated Cisterns of Endoplasmic Reticulum Near the Nucleus of a Plasmacell (→) x 27,000

Notations: N: cell nucleus
G: Golgi body
rER: rough endoplasmic reticulum

developed with numerous tiny sacs. A peculiar microtubular filamentous structure of unknown nature was found in the dilated cisterns of rough endoplasmic reticulum nearby (Figure 6).

Also the lymphocytic apoptosis was observed in the peripheral blood of three patients.

Under an electron microscope, plasmacells were not seen in the ultrathin sections of the peripheral blood of healthy individuals.

Discussions

The ultrastructural abnormalities of platelet in the peripheral blood of early stage EHF patients seen under an electron microscope are consistent with the sharp decrease of platelets, morphological abnormalities and enlargements that have been observed clinically. They not only verify the diagnostic values of these changes in platelet to the early diagnosis and confirmation of EHF but also have implications in clarifying the disease process of EHF. It is believed that the decrease in platelet and its morphological abnormalities have to do with the inability of the macronuclear cells in the bone marrow to reach maturity and their subsequent poor conversion into platelets. We have seen some suspicious looking dense particles with diameters around 100 nm within the dilated tubules in the granule region of the macroplatelet of the patients. They are similar to the EHF virions that infect the Golgi sac of

mouse hippocampal gyrus neuron. But there are very few of them and the confirmation requires observations on more cases.

There are very few plasmacells in the peripheral blood of normal, healthy individuals. However, the proportion of variant lymphocytes could exceed 25 percent in the peripheral blood of a substantial number of early EHF patients. This abnormality could also have diagnostic value.¹⁻⁴ The plasmacells at various stages of development that we observed under an electron microscope in the peripheral blood look just like the various types of variant lymphocyte seen in the blood smears. Apparently, they are transformed from B-lymphocytes in response to the stimulation of antigens, thus suggesting the existence of the B-lymphocytes in the circulation that are activated by certain antigens as early as the 3d day after the onset of the disease. As to whether the antigen is the EHF virus itself or a certain protein awaits further study. The nature of the peculiar microtubulous filamentous structure seen in the cisterns of endoplasmic reticulum of the plasmacell of a 5-day patient and particularly whether it is associated with the EHF virus are questions that need to be investigated further.

Because of the existence of the above-mentioned ultrastructural abnormalities of platelet, it is necessary to collect the bone marrow samples of early stage patients for the observation of the ultrastructural changes during the formation of macronuclear cells and platelets in order to further clarify the disease process of EHF.

Conclusions

Using a transmission electron microscope to examine the ultrastructural abnormalities of peripheral blood cells of the seven early stage EHF patients ranging from 3 to 11 days after the onset of the disease, it was found that platelets turned into round shape with greater number of pseudopodium and that macroplatelets (exceeding 6 μ m in diameter) emerged. In the cytoplasm of some macroplatelets, there was marked dilation of the open canalicular system and dense particles of various sizes were present in the channels. The dense tubular system was often seen to be clumped and formed membranous complex with open canalicula. Degenerated platelets were occasionally seen.

In the meantime, numerous plasmacells at various stages of development were seen in the peripheral blood under electron microscope. A peculiar microtubular filamentous structure was observed in the dilated cisterns of endoplasmic reticulum of the plasmacell obtained from a patient 5 days after the onset of the disease.

In this article, the diagnostic significance of the ultrastructural abnormalities of platelet and the emergence of plasmacells in the peripheral blood of early stage EHF patients and the mechanism of their occurrences are discussed.

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ROMANIA

CURRENT STATUS OF TUBERCULOSIS DISCUSSED

Bucharest PNEUMOTIZIOLOGIA in Romanian Vol 4 Oct-Dec 85 pp 289-299

[Article by Prof C. Anastasatu, Silvia Bilauca and D. Plopeanu. (General report to the 13th National Conference on Tuberculosis, Bucharest, October 1985)]

[Text] The era of great accomplishments of the last two decades that went down in the country's history as the "Ceausescu Era," distinguishes itself by the special achievements not only in the major realms of socioeconomic development but also in the area of public health, in improvement of the quality of life, in the advancement of the medicine of the healthy individual, in maternity and child care, in youth care, in the increase in life expectancy, in marked decline of transmissible diseases, tuberculosis included.

As far as this latter disease is concerned, a disease that in the first half of our century generated broad suffering all over the world and in our country, the epidemiometric indicators in the last 20 years show a steady decrease, without, however, tuberculosis having ceased to be, in most countries of the world, a priority public health problem.

1. Current Epidemiologic Context Internationally

The current international context of the endemic of tuberculosis in the Socialist Republic of Romania (Tables I and II) is very diverse and hard to define. In the

Table I

Incidence of Tuberculosis					
Minimum level		Medium level		Maximum level	
5 - 15% _{ann}		45 - 75% _{ann}		→ 150 - 550% _{ann}	
Denemarken	6,4	Finlandia	43,8	Hong-Kong	150,0
Israel	6,4	România	54,1	Lesotho	213,0
Norvegia	9,2	Japonia	58,1	Filipine	255,9
Australia	9,7	Iugoslavia	74,4	Coreea de Sud	308,7
Canada	10,7	Grecia	75,3	R. D. Yemen	535,5
		Polonia	75,3		

Incidence of tuberculosis

0 $\frac{\%}{100,000}$ inh. a. 73

Greece	75.3
Polonia	75.3
Yugoslavia	74.4
Portugalia	73.0
România	54.0
Ungaria	50.5
Finlanda	43.8
Czechoslovakia	39.0
Bulgaria	33.8
Austria	25.8
Belgia	25.1
R. D. Germania	22.3
Elvetia	21.3
Scotia	21.3
Luxemburg	19.2
Anglia și T. Galilor	18.8
Suedia	18.0
Irlanda	12.3
Olanda	12.0
Norvegia	9.2
Danemarca	0.4

EUROPA

Greece	75.3
Polonia	75.3
Yugoslavia	74.4
Portugalia	73.0
România	54.0
Ungaria	50.5
Finlanda	43.8
Czechoslovakia	39.0
Bulgaria	33.8
Austria	25.8
Belgia	25.1
R. D. Germania	22.3
Elvetia	21.3
Scotia	21.3
Luxemburg	19.2
Anglia și T. Galilor	18.8
Suedia	18.0
Irlanda	12.3
Olanda	12.0
Norvegia	9.2
Danemarca	0.4

Table II

Mortality from tuberculosis

0 $\frac{\%}{100,000}$ inh. a.

Yugoslavia	9.8
Polonia	9.8
Ungaria	8.8
Portugalia	5.0
Luxemburg	5.5
Finlanda	1.0
Austria	3.8
Bulgaria	3.8
România	3.6
Irlanda	3.5
Franta	3.0
Elvetia	2.9
Grecia	2.7
Belgia	2.3
R. F. Germania	2.2
Norvegia	2.0
Suedia	2.0
R. D. Germania	1.9
Irlanda de Nord	1.3
Scotia	1.3
Anglia și Tara Galilor	1.1
Danemarca	0.9
Olanda	0.3

main internationally it is at the level in countries with medium endemic: behind the advanced countries of North-West Europe, North America, Australia and others (which show indicators 70-90 percent lower than those in Romania), but ahead of developing countries in South-East Asia, Africa and Latin America, representing two-thirds of the world population, with indicators of 3 up to 9 times higher.

In the European context, this country, which 20 years ago took last place (inherited before World War I), now places more favorably, with a TB morbidity and mortality level which is lower than that in countries such as Poland, Yugoslavia, Greece, Portugal, and so forth. For the subsequent period the trend is to take a medium place — a place which, however, in light of the current possibilities and demands of medicine, we do not consider as satisfactory.

2. Status of Major Epidemiometric Indicators During the 1965-1985 Period With Emphasis on the Last Five-Year Plan

The main indicators which enable us to evaluate the dynamics of tuberculosis in the last 20 years and its level at the end of this five-year plan are the overall annual incidence and the new cases of the disease, the incidence of the disease in children, the prevalence of the cases of disease, the incidence and prevalence of tuberculous infection, mortality from tuberculosis and other derivative indicators.

In terms of the overall incidence of tuberculosis, the data show in 1984 a level of $57.30/0000$ by 68.9 percent lower than in 1965 when it was $184.40/0000$ (Fig. 1). The mean annual rate of decrease was 3.6 percent, slightly higher than that in some European countries.

The incidence of new cases of the disease decreased during the same period from $169.10/0000$ to $52.0/0000$ (hence by 69.3 percent). The relapses or the readmitted cases also decreased 65.1 percent, from $15.20/0000$ to $5.30/0000$ (Figure 2).

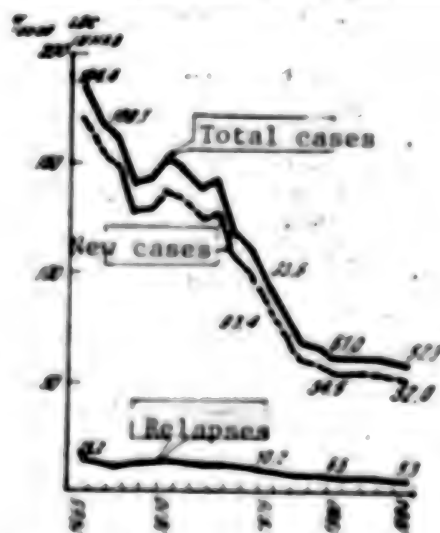


Fig. 1. — Incidența tuberculozei — 1965—1984

Incidence of tuberculosis

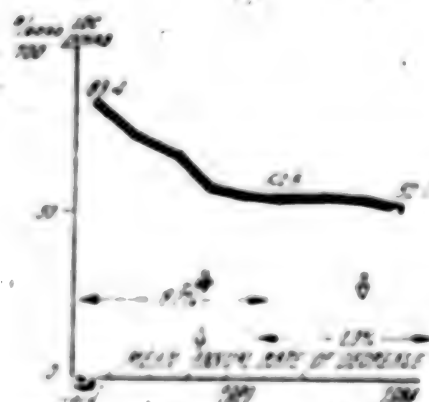
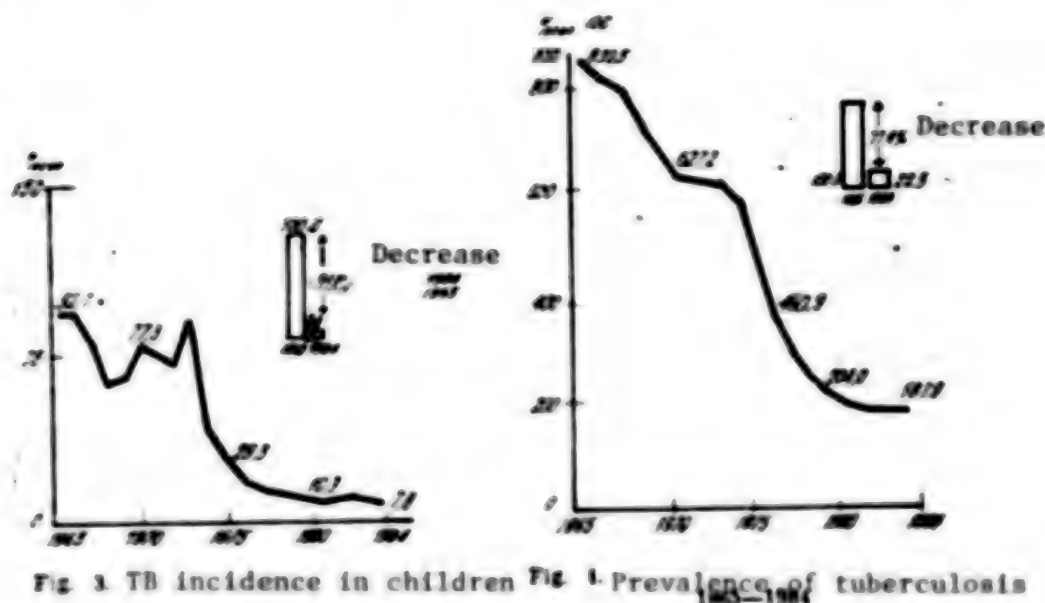


Fig. 2. — Incidența cazurilor noi de tuberculoză — 1970—1984

Incidence of new TB cases

Under the last five-year plan the mean annual rate of decrease in the incidence was slower than under the prior five-year plan (1.3 percent during the 1981-1985 period versus 8.7 percent during the 1976-1980 period) (Figure 2). This slowdown corresponds with a trend toward stagnation or very slow decrease noticed under this five-year plan in almost all countries in Europe. We no longer refer to developing countries where, according to calculations made by WHO and UICIT experts, even if reductions were recorded in percentages, because of the doubling of the population the absolute number of TB cases are on relative increase.



The incidence of the new cases of the disease in children 0-14 years of age (Figure 3), a more sensitive indicator of the epidemiologic potential on the territory, declined here in the 20 years surveyed from 92.70/0000 to 7.30/0000 which translates to a reduction of 91.6 percent -- with a mean annual rate of decrease of 4.8 percent (greater than in adults).

The prevalence of tuberculosis (Figure 4) which more correctly expresses the magnitude of the problems generated by this disease, decreased in this country from 832.50/0000 in 1965 to 187.90/0000 in 1984 (a 77.4 percent decrease).

The data which we have available on the incidence and prevalence of TB infection, data based on tuberculin testing (PPD) carried out on samples of representative infant population, show evident decreases also for these indicators which

are now considered by WHO as most relevant.

Based on a calculus method developed by the institute one may assess that the prevalence of the infection at the age of 6, for instance, decreased from approximately 11 percent in 1965 to 2.1 percent in 1984 (80.9 percent decrease) (Figure 5).

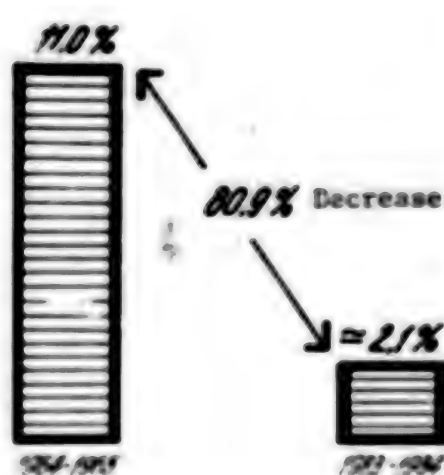


Fig 5. Prevalence of TB infection at the age of 6.

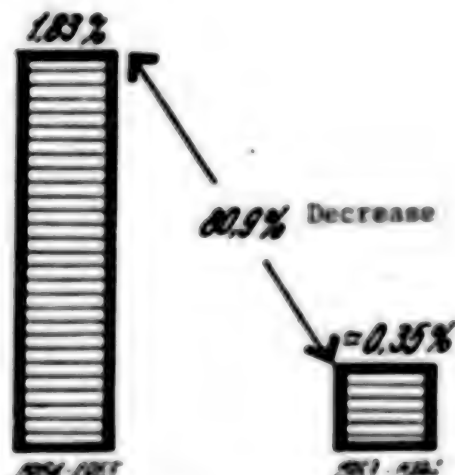


Fig 6. Incidence of TB infection at ages 0-6.

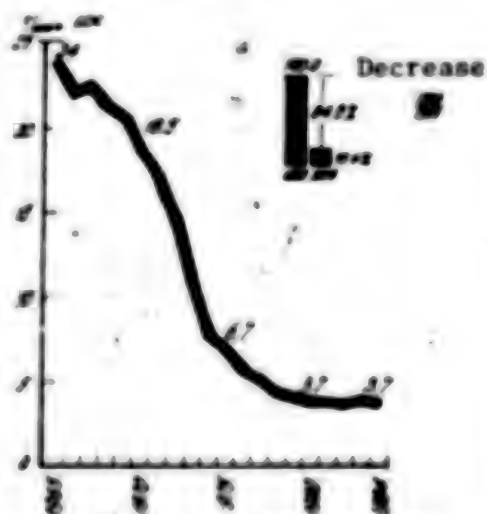


Fig 7. Mortality from tuberculosis - 1965-1984

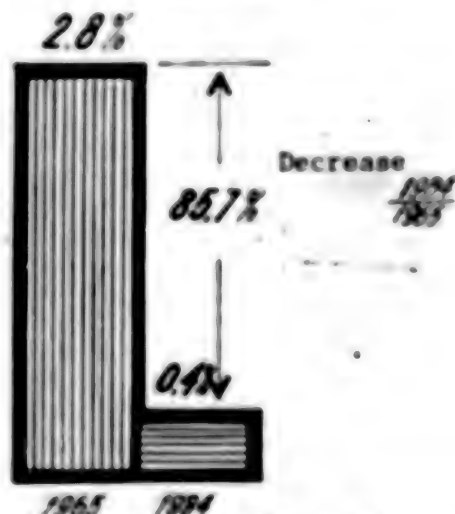


Fig 8. Lethality from tuberculosis

Similarly, the incidence of infection in children aged 0-6 decreased from 1.8 percent in 1964-1965 to 0.35 percent in 1983-1985 with a mean annual rate of decrease of 4.3 percent (Figure 6.)

Lastly, in the evolution of TB mortality there has been a decrease from 24 percent to 3.7 percent, i.e. 84.6 percent, with a mean annual rate of 4.4 percent (Figure 6). This decrease also had a repercussion in the lethality index. Tuberculosis now only has an input of 0.4 percent in general mortality (versus 2.8 percent in 1965 (Figure 8).

In children the decrease in mortality was even more marked -- from 3.6 percent in 1965 to 0.18 percent in 1984 (95 percent with a mean annual rate of decrease of 5 percent) (Figure 9).

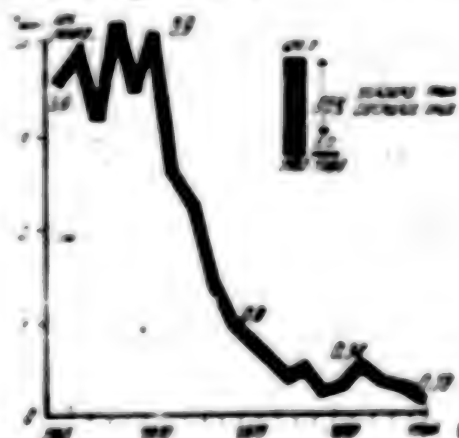


Fig. 9. TB mortality in children 1965-1984



Fig. 10. Temporary work disability due to tuberculosis 1964-1984

An indicator which is now regarded as very valuable because it expresses the economic losses evaluated in days of work disability for 100 working people (the so-called gravity index) also developed favorably from 93.8 days in 1963 to 25.9 days in 1984, translating to a decrease of 72.4 percent (Figure 10).

Moreover, outstanding decreases were obtained during this period in a number of derivative indicators such as: frequency of primary chemoresistance of germs (bK) from 19.3 percent bacilliferous to 7.6 percent; the frequency of secondary resistance from 76.4 percent bacilliferous to 37 percent; the maximum prevalence of bacilliferous -- from 110⁰/0000 in 1968 to 71.5⁰/0000 in 1984 (35 percent) (Figures 11 and 12).

Noteworthy is the fact that as a result of the massive decrease in tuberculosis it was possible for a number of 12,894 beds in the anti-TB system to be reappointed to serve other needs of public health, including those in the network of non-TB chronic pulmonary diseases. On the whole, these results were made possible thanks to the input of two categories of factors of outstanding significance:

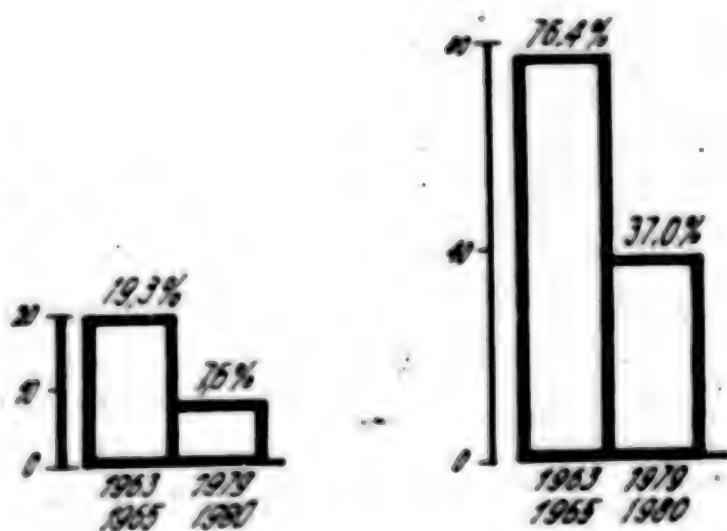


Fig. 11.
Primary chemoresistance. Secondary chemoresistance.

1. Placing first is the steady improvement in living and working conditions and the hygienic-sanitary and cultural standards of the population, an improvement which is illustrated by all socioeconomic indicators during the period of 20 years under review.

Fig. 12. Maximum bacilliferous prevalence -- 1968-1984



2. Placing second, but no less important, is the impact of the measures of prevention and combating of tuberculosis, materialized in the five-year programs under the long-term plan outlined by the Ministry of Health, with projections by the year 2000. We do not dwell at length on this program because it is the topic of an individual report.

We only wish to stress that the program for prevention and combating of the disease, also, is closely tied in with the improvement in the overall living conditions, being both a component and a direct consequence of these conditions.

3. Current Characteristics of TB Endemic in Romania

On the whole, based on the epidemiometric indicators described, one may state that tuberculosis in Romania in the last 20 years has been on a continuous decrease -- the figures in 1984, like those for the 8 months of 1985 being the lowest figures recorded in the history of tuberculosis in this country.

However, if we examine in detail, specifically some derivative indicators that represent "the most significant fraction" of basic indicators, there appears a number of aspects that are more or less characteristic for our country (in the European context) and which have a certain degree of gravity that calls for special attention.

For instance, we still note the persistence of a "juvenile peak" of TB mortality which so far involved the 20-24 age group (more than 200⁰/₀₀₀₀ in 1965), but much decreased and shifted in 1984 to the 25-29 age group (90.9⁰/₀₀₀₀) Fig. 13).

The obliteration of this juvenile peak, that is the more accelerated decrease of tuberculosis in young people, is a priority must.

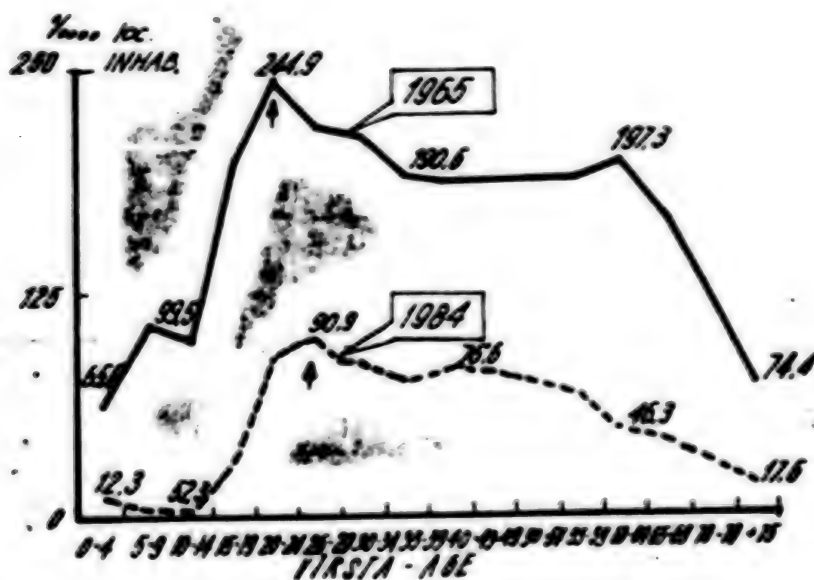


Fig. 13. Incidence of new TB cases according to the various age groups

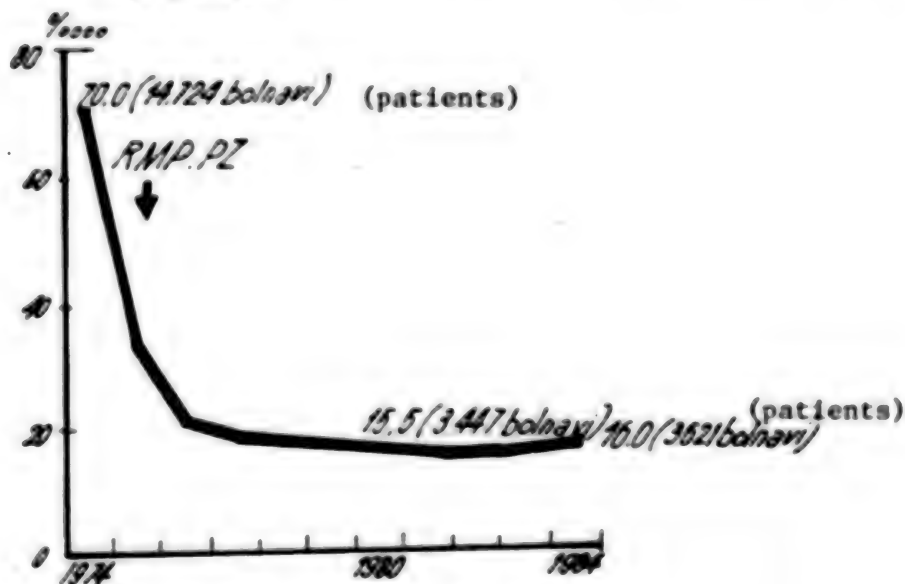


Fig. 14. Prevalence of chronic patients.

Bacilliferous prevalence which expresses the "bacilli supply" on the territory, that is the density of the sources of infection, i.e. the risk of infection and overinfection on the territory, also shows, under the last five-year plan, a tendency toward stagnation, at a level that is lower than that under the prior five-year plans, but still unsatisfactory.

Correlated with bacilliferous prevalence also is the persistence of a constant prevalence ($160/0000$) of chronic and hyperchronic patients (group I B and I C dispensarial) that maintain the eliminative sites of resistant germs and disable for long periods a sizable number of patients (about 3600) (Figure 14).

An adverse aspect noted in many European countries, including Romania, involves the comparatively small number of early detections, in other words, the advanced stage, with cavitary lesions in which new TB cases in adults are discovered, after, in majority, infections and morbidity already occurred in contacts. This fact follows from inadequate detection methods and specifically noncompliance of patients who do not contact the physician when the first symptoms of the disease appear but only when they become disabled in terms of activity (Figure 15).

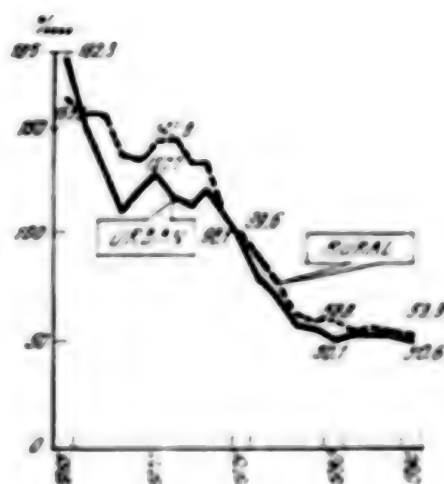


Fig. 15. TB incidence, all forms 1965-1984

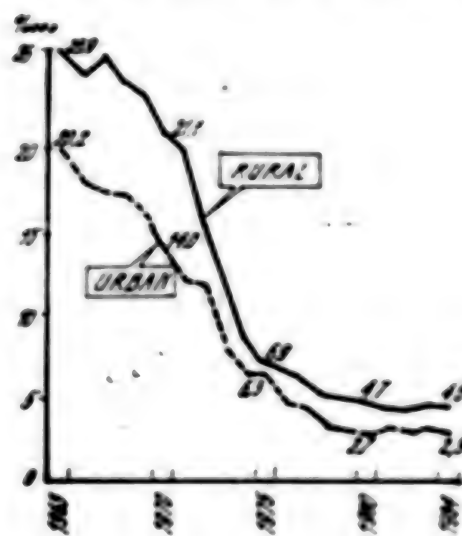


Fig. 16. TB mortality 1965-1984

Another characteristic of TB endemic involves the presence of extra gravity aspects in rural areas versus urban areas. Even though under the last five-year plans the TB morbidity and mortality curves in the two types of areas came very close to each other, they still are slightly higher in the rural areas, due to the higher incidence of TB meningitis, of tuberculosis in young people.

As differences in living conditions in urban and rural areas are being eliminated, in the main, the premise is being increasingly created for tuberculosis no longer to present differentiated aspects (Figure 16).

A final aspect which we note is residual TB overmorbidity increasingly concentrated on so-called "marginal" social categories that include alcoholics, transients, people with no direction, recalcitrants, individuals outside the law, and the like who now involve most of the advanced, chronic, insoluble cases. This phenomenon is common throughout the world and in terms of tuberculosis will be resolved only when the basic aspects have been resolved.

The significance of these detail characteristics of TB endemic fades when they are viewed against the general backdrop of the decrease in tuberculosis. However, these characteristics keep intact their import in the concrete case of differentiated application of the measures under the program for prevention and combating of the disease.

4. Prognosis of the Endemic by 1990-2000

If we survey the perspectives of TB evolution in the future by 1990-2000 in this country, but also in the European context to which we are tied, we have reasons to be optimistic and pessimistic at the same time.

The optimism is justified by the fact that tuberculosis -- as we have seen -- decreases slowly and it is to be expected that it will continue to decrease. Forecasts made in Romania jointly with the Bucharest Research and Design Institute, show that in 1990 Tb incidence may reach 42-46⁰/0000 and in the year 2000, a possible level between 21-36⁰/0000 inhabitants.

A touch of pessimism is justified by the tendency toward stagnation which was already pointed out, and by the fact that forecasting evaluations, regardless of their calculation basis, are fairly relative, because they cannot take into account all the phenomena that occur meanwhile and are able to influence the evolution of the disease.

One of the phenomena that hampered the decrease of tuberculosis internationally and specifically in developing countries involved the doubling, during 32 years, of the number of inhabitants. Hence, in spite of the decrease of some indicators expressed in percentages, the absolute number of TB cases went up, a fact which resulted in a greater density of infectant sites over the same inhabited area.

Romania does not have this problem, but in the same manner or in different manners also other unpredicted phenomena may intervene in forecasting calculations. Therefore any forecast in terms of tuberculosis must be taken as orientational.

The long-term program for fighting tuberculosis must permit adaptation to such an unpredictable phenomena.

5. Main Guidelines of the National Program for Prevention and Combating of Tuberculosis in the Next Period (by 1990-2000)

In light of the current status of tuberculosis internationally and in Romania, of its possibilities of evolution under the next five-year plans, and of the existing model now in very advanced countries (North Europe) in the anti-TB fight, one may state that by the year 1990 or even by the year 2000 the five-year programs for prevention and combating of tuberculosis in this country, like in many other countries, will have to maintain their current rate and intensity, of course with the decrease in the volume of projects contingent upon the decrease in tuberculosis.

In the spirit of the "Special Program for Improvement of Public Health Care" recently approved by higher bodies, it will be necessary to step up and refine the methods for early detection so that the immense majority of patients may be tracked down in incipient stages, with paucibacillary sputum, before the occurrence of the infection of contacts.

Early detection will permit prompter and more effective treatment. To this end, also the treatments now advocated that involve modern drugs (RMP, PZH) and a short-term application (6 or less than 6 months) must be continuously improved both as to intrinsic efficacy and mode of administration under strict supervision, so that all cases may be rapidly cured and relapses and chronicizations which now swell the prevalence of problem cases may be prevented. On a long-term basis to be expected also is the mastering of the production of drugs with better efficacy and tolerance than those prevailing now.

Furthermore, the method of antituberculous vaccination must be utilized on a broader and more correct scale. To be desired is even the preparation of a more effective vaccine, that would assure certain immunization of all children, for the rest of their lives, against TB infection and morbidity.

Also, the chemoprophylactic method must be potentiated to the utmost and expanded to include all the categories of the population with higher morbidity risk.

For a long period of time it is also necessary to very stringently apply the prophylactic-antiepidemic measures of fight on the site.

Improvement in the quality and efficacy of the measures outlined in the national programs as to the guidelines pointed out above depend both on superior organization of the projects and on the innovative input which will be provided in the future by scientific research in the realm of physiology. Research in all the directions mentioned above is now developing and we must have trust that it will produce positive results.

We conclude with the conviction that tuberculosis in this country has reached a level at which it can and must be controlled and eliminated as a public health problem by the end of this century, or even earlier.

TANZANIA

BRIEFS

BILHARZIA IN ZANZIBAR--Pemba: About 50 percent of the people have been found to have Bilharzia germs as a result of a preliminary research carried out on school children in Pemba. This was said yesterday by an expert on Bilharzia from Italy, Dr (Orinso Fabio), when addressing representatives of the Committee of Economy and Finance of the House of Representatives, who visited the center for investigation of the disease at Mkoroshoni, Chake, to inspect the progress of the project which is a joint one between the government of Zanzibar and the WHO. [Excerpt] [Zanzibar Domestic Service in Swahili 1600 GMT 3 May 86 EA] /12712

CSO: 5400/119

YUGOSLAVIA

SPECIALIST DISCUSSES AIDS SITUATION IN COUNTRY

Zagreb VJESNIK in Serbo-Croatian 6 Apr 86 p 7

[Article by Salih Zvizdic: "How Are We Protecting Ourselves Against AIDS?"]

[Text] Prof Miha Likar, the director of the Institute for Microbiology of the Medical Faculty in Ljubljana, a prominent Yugoslav expert on AIDS, showed me the latest report, from March, by the World Health Organization on the spread of AIDS.

"The disease is pandemic and very dangerous, since it is untreatable and contagious, and so it is understandable that its spread in the world is being followed very carefully. You see, even before 1 March we had two cases of AIDS in Yugoslavia, but this report only cites one. Now, a month later, we have three cases, and again only one is recorded! I think that this is an irresponsible attitude toward reporting on the spread of this disease, which is concerning the world more and more," says Prof Likar.

[Question] In explaining your resignation from membership in the Slovene Republic Commission for Contagious Diseases (and for AIDS), the republic secretary said that you did this because of an excessive workload?

"That is not true. I was, and I am now, dissatisfied with the way people are acting in Slovenia and in Yugoslavia in general in the preventive struggle against AIDS," Prof Likar states.

Money for Others -- That Is the Question

As the director of the Institute for Microbiology, Yugoslavia's Chief Referral Center for AIDS (the disease cannot be confirmed until it has been verified at this institute), Prof Likar says that the institute is in an unenviable financial position, because it spends its own money on AIDS, "even though it handles all of the Yugoslav cases that are sent."

"It has been agreed at the federal level that for every suspected case of AIDS that is established in Zagreb, Belgrade, and Ljubljana, the patient's blood will be tested here, regardless of previous tests. At the time when the decision was made on this, our institute had the best and longest tradition in virology. Last year the Federal Executive Council approved 30 million dinars

for the preventive struggle against AIDS, but we, who test every suspected case of AIDS that is sent, only received 2.5 million of this. The rest of the money went to the Institute for Molecular Biology in Belgrade, which will spend it for research on AIDS. It is a good institute, but research, which is after all being done by much wealthier institutes in the world, is one thing, and quite practical requirements for purchasing the means to test the blood of patients and prove the presence of the disease are another," the professor explains.

The professor says that the Ljubljana Institute used 10 million dinars of its own money to buy a special processor for the so-called "ELISA" tests for AIDS (it can also be used for other tests), and a few days ago, using money collected from Slovene work organizations, it bought a special ultracentrifuge for \$107,000, which, among other things, is essential for testing the AIDS virus.

"Aside from these purchases, we at the Institute have spent about 10 million dinars on AIDS tests, 7 million of which was just for antigens, components without which the tests cannot be performed. As the head of the Institute, I feel responsible for the 10 million dinars spent at a time when a hundred employees at the Institute have low average salaries and when we even question the purchase of ordinary writing paper," Prof Likar says.

In any case, at this institute every blood sample is tested twice with the "ELISA" test and once again with the "Western blot" test. If they are not certain even then, they send the blood sample abroad at their own expense. Each "ELISA" test costs 7000 dinars, and each "Western blot" test costs 15,000, part of which is in foreign exchange.

Serious and Unusual Disease

Prof Miha Likar (62) is a prominent virologist, who has so far conducted more than 200 scientific studies in this area, and is also well known as the author of several books in the area of microbiology and popular medicine. He is a member of the group of European experts on AIDS, in which he represents our country.

"I do not know now whether I am a member of the Federal Commission on AIDS; I do not know the status of our institute in this area any more, although we test responsibly every blood sample that is sent. I was a member of the Federal Commission for Contagious Diseases, which includes AIDS, but I was not invited to the recent conference for journalists on contagious diseases, at which AIDS was discussed most," Prof Likar says.

According to the professor, this disease is still full of puzzles, and some information about it falls into the area of "science fiction." The cause of the disease is a virus from the group of retroviruses, which are known for changing their form. A few days ago, in fact, it was scientifically confirmed that one of the discoverers of the AIDS virus, the French scientist Luc Montagnier, had discovered a second AIDS virus from the group of retroviruses. This second virus is essentially different from the first, among other things because it has not reacted to any of the tests established to date. AIDS,

which is manifested as an acquired syndrome of a reduction in the immunological defense of the organism, has causes in the genes, and genes cannot be penetrated easily. It is therefore difficult to predict when the world will have an effective vaccine against this "new plague" of mankind.

The disease is spreading throughout the world with disturbing speed, and the danger is greater where preventive measures have been neglected. In the United States, so far 17,000 people have come down with AIDS, 9,800 of whom have died. Since 1 January 1986, 2,129 people in that country have come down with AIDS, compared to 1,082 during the same period last year. Every week an average of 220 people in the United States become ill! In Italy, 23 cases were recorded by last April, and this year there are 164. The disease is spreading rapidly everywhere, and as a rule the number of cases has doubled in less than a year. It is logical that our country, which is open to the whole world, and is furthermore oriented toward tourism, cannot be immune to this epidemic, and so the professor warns that a false picture is being created here when some people claim that "it is not necessary to create an obsession with the danger," although this "is not an obsession, but a real danger."

"You see, in the United States about 2,000,000 people are infected with AIDS, and in Europe about 140,000. No one knows how many of these people will become ill, since not everyone who carries the virus becomes ill, although they are contagious for others. This is, to put it in popular terms, an amazing disease, since it creates antibodies in the blood of the victim, but in this case the antibodies do not offer any protection against AIDS. On the other hand, only a third of those carrying antibodies become ill from the so far incurable AIDS or IRC [as published], a related but relatively curable disease," the professor explains.

What Is It Like in Our Country?

[Question] So far three cases of AIDS have been confirmed in Yugoslavia. Professor, do you think that the disease, in its general inroads in Europe, will also affect us more strongly?

"I do not deal in prophecy, but the spread of this disease in individual countries depends on several factors, particularly on some traditions, including people's lifestyle and sex life, since AIDS is primarily a venereal disease. Of course, a means of preventive protection of people in the so-called risk groups (homosexuals and bisexuals, drug addicts, and hemophiliacs) is important, and it is especially important to inform the public at large accurately about the manifestations of the disease," he asserts.

The professor emphasizes that in our country, within the risk group hemophiliacs are particularly threatened; their disease is manifested in their blood's inability to coagulate, and so they take the "factor VIII" and "IX" blood preparations. These victims are suffering throughout the world because they receive blood from people infected with AIDS. For this reason, all blood taken for transfusion in the United States and all the West European countries is tested.

"I am not certain whether I am completely right, but I claim that it is very irresponsible that there are still institutes for transfusion in Yugoslavia that do not test blood for AIDS. I only know of this being done in Ljubljana and Zagreb, but blood is donated throughout the country. It is true that the Federal Institute for Health Care has banned all imported blood preparations for treating hemophilia produced by companies that have not tested the blood for AIDS, but this is also a question of blood from our own institutes, which is used for transfusion in general. Each year we need about DM 16,000,000 for purchasing imported components to carry out just one test of suspected blood samples, and about \$50,000 annually is needed to inspect blood that is taken for transfusion. For impoverished health care this is a great deal, but it is the least that we must do, for others have invested much more. For us, the problem is not just collecting the money, but also determining how it will be collected. That is not a preventive measure," the professor says.

Professor Likar states that our country does not yet have any legal regulation of the issue of the status of the disease and of those suffering from AIDS. For example, how should a doctor react with respect to the environment of a person proven to be carrying antibodies or the AIDS virus? Should the family of such a person be warned of this, or others associated with him, even though one must expect that in most cases such a person will endure isolation even from those closest to him, since his illness is contagious for those around him? In other countries such warnings are covered by laws, but in our country in this regard there allegedly exists a decision by the Federal Commission on AIDS, which, unfortunately, many people do not comply with.

Not Quite Everything Is True

The Ljubljana Institute for AIDS has so far tested about 900 samples of blood serums, about half of which belonged to people requesting this themselves because they suspected that they had the AIDS virus in their blood (drug addicts, homosexuals, hemophiliacs, some doctors working with victims, etc.). In 75 cases, however, the presence of the AIDS virus was established (according to federal data, there have been a total of 180 positive findings in Yugoslavia).

"We estimate that of these 75 cases one third, i.e. 25 people, will come down with AIDS or IPC [as published]. When? It cannot be predicted, since the incubation is long time and differs a great deal from patient to patient. On the other hand, the question is whether this is everyone who will become ill here," our interlocutor states.

We tried to find out what comrades from the Federal Committee for Health said about some of the professor's assertions.

"Our Committee allocated the Institute in Ljubljana 2.5 million dinars for the service of a referral laboratory, since that is how much was contracted for, and they can charge for everything outside that contract according to the list of rates. On the other hand, the Federal Executive Council did not approve any 30 million for the purpose of the fight against AIDS," says Dr. Nikola

Georgievski of the Federal Committee for Health. He states that the Ljubljana Institute never requested funds for the purchase of equipment, and that if it had requested them, it could not have sent the request to that Committee.

Assistant Professor Aleksandar Dujic spoke about Prof Likar's assertion that the Belgrade Institute had received 27.5 million dinars:

"It is not true that the Institute for Genetic Engineering in Belgrade received that money; instead, that request was postponed until later on at the latest meeting of the Federal Commission for AIDS. Otherwise, we do not understand what Professor Likar wants, since he himself requested that the microbiological institute in Ljubljana become a referral laboratory, but it seems that he was thinking of building a completely new institute. I heard that he had even requested 900 million dinars, although I do not know whether that is true. In any case, as far as Prof Likar's prediction about the spread of the disease is concerned, I agree with Likar. We have a total of 180 seropositive individuals, and I will even state that there are three or even five times as many, of whom we do not know that they are positive," Dr Dujic says.

9909

CSO: 5400/3015

YUGOSLAVIA

SUSPECTED AIDS CASE REPORTED IN SARAJEVO

Sarajevo OSLOBODJENJE in Serbo-Croatian 16 May 86 p 3

[Text] Recently, some of the public media reported that a case of AIDS had been discovered in Sarajevo. The news springs from unofficial sources, because officially it has not yet been proven that AIDS is involved, for every possible case of that illness must be examined at specially equipped, so-called reference laboratories (in Ljubljana, Zagreb, or Belgrade) and confirmed by a special commission in Belgrade.

However, the possibility that AIDS is involved has not been ruled out, for all the symptoms, as well as the tests that have been performed, confirm that the case may indeed be AIDS, a disease which has been terrifying Americans for 5 years already and which is now feared by the inhabitants of many developed West European countries. Because no infectious disease recognizes state borders, Yugoslavs are not protected from this pernicious virus, as is evidenced by the three officially confirmed cases of AIDS discovered in our country to date. In addition, investigations have shown that about 30 percent of our drug addicts are infected with the AIDS virus, as well as 3 to 5 percent of homosexuals (unfortunately, their exact number is unknown, because they rarely "go public" and report for examination). Also infected are 14 to 15 percent of hemophiliac children who received from America the so-called "factor 8 and 9," a medicine that was infected with AIDS. That medicine is no longer used here, but it left as a legacy the "American disease."

As is known, carriers of the virus do not necessarily contract the disease, which is usually spread by homosexuals, drug addicts, and prostitutes, and which is transmitted by means of blood transfusions in which the blood is not examined, by unsanitary hypodermic needles, etc.

Proceeding from the supposition that AIDS--a disease for which there is no cure--can also turn up in Bosnia-Herzegovina, we asked some official health institutions to tell us where or to whom patients who are suspected of having AIDS should go or report. The question was all the more interesting because some general practitioners who receive drug addicts in their clinics told us that such patients return to them even from the infectious disease clinic in Sarajevo with a note that "this is not their case." It appears from this that individual doctors are not

familiar with the possibilities for diagnosing and treating this illness if it appears here.

In the Committee for Health and Social Welfare of the Executive Council of Bosnia-Herzegovina it is felt that every suspected case of AIDS should be sent to the infectious disease clinic in Sarajevo, and if the specialists in that clinic thought that they were dealing with a case of AIDS, the patient should be sent to one of the reference laboratories in Ljubljana, Zagreb, or Belgrade, where the diagnosis could be confirmed.

Additionally, we learned from Prof Dr Jakob Gaon, one of the leading epidemiologists in Sarajevo, that he had just translated the WHO "Directives for AIDS in Europe," which will soon be published, principally to familiarize health workers with these problems. He thinks that it is essential even now to ready a health center specializing in that disease, which would test for the presence of the virus in the blood of certain (suspect) sectors of the population and at first carry out prevention measures and subsequently, if necessary, concern itself with treating the patients.

/12858

CSO: 5400/3018

11 June 1986

GERMAN DEMOCRATIC REPUBLIC

BRIEFS

SWINE FEVER DIAGNOSED--Berlin (ADN)--Two cases of classic swine fever were diagnosed in one pen in Koenigswusterhausen Kreis, Potsdam Bezirk, as the Ministry of Agriculture, Forestry and Foodstuffs Industry reports. All animals in the sty were slaughtered in keeping with the appropriate legal provisions and the required veterinary hygienic measures were initiated. [Text] [East Berlin NEUES DEUTSCHLAND in German 15 Apr 86 p 2] /9604

CSO: 5400/3017

JAMAICA

FUNCTIONS OF VETERINARY DIAGNOSTIC LABORATORY DESCRIBED

Kingston THE DAILY GLEANER in English 21 Apr 86 p 10

[Article by Sharon Pitterson]

[Text]

The Linton McDonough Veterinary Diagnostic Laboratory was established in Jamaica in 1941. It was set up to meet the need for depth laboratory support by veterinary practitioners, livestock and poultry farmers and others involved in animal related matters such as animal disease regulatory officials.

The present facilities were opened in 1978. This laboratory is the only one in Jamaica and offers full service to hundreds of farmers and pet owners each year. One of its major objectives to give diagnostic support to the problems of the livestock and poultry industries, through the local field veterinarians. Staff personnel work in conjunction with specialists from local and international laboratories.

This central laboratory has six component parts namely: Bacteriology, Pathology, Virology, Serology, Parasitology and Leptospirosis which function to establish where possible definitive diagnoses of disease entities from specimens received. Here, post mortem examinations are performed by a Veterinarian, and relevant specimens of tissues, fluids etc. are sent to the appropriate laboratory for the isolation and identification of pathogens or diseased conditions.

The Linton McDonough laboratory is committed to working through local veterinary practitioners since they can evaluate the problems of clients and producers and identify those requiring laboratory assistance. Specimens are submitted to the laboratory at the direction of the field veterinarian. Results of examinations, tests and analyses are returned to the veterinarian for consultation in helping to formulate a diagnosis and to recommend action in terms of treatment regime and or control.

The Laboratory is involved in several projects such as the Food and Agricultural Organizations, Veterinary Health Delivery Project, which is undertaking various surveys such as the parasitic and mastitis problems affecting livestock owners.

A Leptospirosis survey project with Project Hope sees the facility serving as the National Leptospirosis Laboratory. Historically, this laboratory has made significant contribution to the Public Health sector, assisting in the control of zoonotic diseases, those affecting both man and animal.

In the 1947-1951 period it served as an adjunct laboratory to the Government Medical laboratory in preparation of media, identification of *Salmonella* and potency testing on drugs.

The treatment of animals is greatly dependent on the susceptibility responses obtained in the Bacteriology laboratory. Diseases such as Mastitis, Blackleg, *Camphylobacteriosis*, various Mycoses and *Colibacillosis* are identified. The laboratory also facilitates the production of vaccines such as *Escherichia coli* and wart types.

The Serology laboratory functions mainly in the programme to eradicate Tuberculosis and Brucellosis. Here, sera and milk from cattle and sera from goats, sheep, dogs, horses and man are tested for antibodies to the *Brucellae* organisms. Also, Hematological tests are carried out on whole blood as an aid in the diagnosing of anemias, bleeding disorders, hemoparasites and other hematological disorders of animals.

The Leptospirosis laboratory has been designated the National Leptospirosis Laboratory. It works in association with the Veterinary Public Health Sector of the Ministry of Health in the survey and diagnosis of leptospirosis, a Zoonotic disease affecting both humans and animals.

In Parasitology the main service provided in fecal egg counts of gastrointestinal parasites of animals. There is also the isolation and identification of some blood parasites such as **Heartworm** in dogs, Anaplasmosis and Piroplasmosis in sheep, cattle and goats.

In the Histology laboratory, consulting Veterinary Pathologists work on the diagnosis of pathological entities. In addition, this laboratory serves to facilitate the teaching of Medical Technologists from the College of Arts, Science and Technology (CAST).

Screening programmes and the survey of certain Viral and Poultry diseases are undertaken through the Virology and Poultry pathology laboratory. This helps to establish an islandwide profile of animal diseases due to viruses and to make for an early recognition of the presence of some important Viral diseases. Tests are made for diseases such as **Newcastle Disease**, Salmonellosis, Equine Infections, Anemia, **Pseudorabies**, Toxoplasmosis, Caprine Arthritis/Encephalitis and Bovine Leucosis. These tests are important in determining the status of livestock and products for import and export.

The Veterinary laboratory works in conjunction with the Government Toxicology Laboratory in diagnosing poisoning by plants, chemicals and other substances.

The field veterinarian, based on the clinical history, Post mortem findings definitive diagnosis of the particular disease entity. Results are discussed with farmers and the appropriate treatment regime effected.

The laboratory, located at Hope, adjacent to Hope Boulevard is open from 8:30 a.m. — 5:00 p.m. daily weekdays. Here, a team of veterinarians, Medical Technologist and Technical Assistants work together in the diagnosis of animal and zoonotic diseases, in addition to giving advisory information to livestock owners and the public.

MEXICO

CHARACTERISTICS OF HONEY-STEALING NATIVE BEE DESCRIBED

Mexico City CONTENIDO in Spanish Apr 86 pp 35-37

[Article by Jose Mora J.]

[Text] The "niit-kib" have nothing in common with the controversial African bees. They are found in large numbers in Yucatan in particular, and they live to rob and murder.

Barely visible through the dark foliage, a long, narrow tube of wax projects from the top of the tree. It is the entrance to a sylvan beehive, which suddenly begins to spit forth the shiny little dark brown bodies of speeding bees preparing to begin another day. Initially the bees buzz and circle around the nest, waiting for the rest of their comrades. When the swarm has become dense, they all set off, as if at a signal, in the same direction.

They are going in search of food. But this will not be done with each bee on its own peacefully and industriously paying visits to flowers here and there. Instead, they will make a devastating collective incursion, plundering and killing. These miniscule insects are the real killer bees, and they have nothing in common with the African variety which has achieved notoriety thanks to reports in newspapers, films and television programs. And in addition, they are not even related to the African bees. They belong to an entirely different genus, family and species. They are included in *Lestrimelitta limao*, one of the dozens of species of native bees on the American continent found in Mexico and other countries, which the biologists term *Meliponinae*.

All of these native bees are characterized by small size, smaller than that of the common European bees introduced by the Spaniards, of which the African or Africanized bee is but one variety. They are also characterized by the lack of a stinger. Almost all of them have habits similar to those of the European bees. In other words, they spend their time collecting pollen, water and resins. The *Lestrimelitta*, commonly called "niit-kib" in Maya, "limoncillo" in Spanish, and "limon-kab," a hybrid Mayan-Spanish term, are the exception. These bees are what entomologists delicately term kleptobiotic, i.e., they are thieves.

The swarm advances on a European beehive and dives on the sentinels guarding the entrance. Caught by surprise, the sentinel bees try to put up a

resistance, but they are speedily and efficiently annihilated. The invaders then stream in torrents through the open breach and scatter through the labyrinthian interior of the hive.

The battle seems an unequal one. The European bees are three times the size of the others, there are more of them and they have their formidable stingers. But the diminutive "niit-kib," on the other hand, have powerful jaws with which they can crush, rip off and mutilate wings, feet and heads. Also, their ferocity is surprising. "Just one of them," Yucatan scientist Jorge Gonzalez Acereto explained, "can confront and vanquish two or three European bees."

The *Lestrimelitta* also use a chemical weapon. Glands located in the jaws secrete a certain substance, a pheromone, which apparently blocks the physiological mechanisms of the victims and weakens their resistance. The sharp lemony odor of the pheromone, which is the source of the common names "limoncillo" and "limon-kab," spreads to every corner of the colony, creating panic and chaos. The queen, the worker bees and the drones try to escape, retreating to the depths of the hive and leaving the honeycomb to the mercy of the attackers, who immediately begin their unrestrained plundering.

The "limoncillos" hurl themselves upon the cells, avidly sucking up their booty of honey, pollen and royal jelly. Some of them, zootechnician Gonzalez Acereto has observed, are so voracious that they strip the growing larvae to extract the content of their intestines.

Wave After Wave

The attackers in the first wave start back toward their hive, flying clumsily because of the load they carry in their stomachs and the weight of the wax adhering to their feet. But new squadrons arrive to continue the methodical pillaging.

The band has established absolute control. One group builds a tube of wax similar to that at their own nest at the entrance to the invaded colony. There they mount guard, driving away or annihilating any foreign bee attempting to enter. The worker bees returning from the field encounter this unfamiliar and aggressive garrison and, confused, they either turn back or try stubbornly to enter, only to be destroyed. In the interior, the centers of resistance are quickly subdued. More and more warlike hordes continue to arrive to join in the methodical destruction and plundering of the hive. Those in the first wave, once they are regurgitated their booty in their own den, return for another load, and so on again and again, until the pillage is almost complete. Only then do the "limoncillos" put an end to their incursion, leaving behind them a trail of corpses, smashed honeycombs, empty cells and terrified survivors. But if the bees succeed in rebuilding the hives, the invaders will return to it. As many as three attacks on a same colony have been observed in the course of one year.

Evolutionary Deviation

The "niit-kib" engage in organized and systematic thievery simply because they have no other way of surviving. All of the other species of bees, both

European and American, have structures called corbiculae, which serve as carriers for transporting the pollen and other products they collect. The *Lestrimelitta* lack these carriers, and as a result it is impossible for them to obtain food in the usual manner.

It is not known if the lack of corbiculae is what forced this species to become thieves, or whether the reverse process occurred. In other words, they may have lost the corbiculae because when they engaged in plunder, these organs became useless appendages which in the end atrophied and disappeared.

An intermediary possibility is that in the distant past, all the *Meliponinae* had more or less rudimentary corbiculae. By a process of natural selection, the corbiculae in the majority of the species were perfected, becoming increasingly efficient with use, enabling these species to specialize in the location, transportation and storage of pollen, nectar, mud, water and resins, all materials used for food or building the hives. But the *Lestrimelitta*, which perhaps developed late, may have encountered a peculiar situation, being ill-adapted to collection, while around them there were flourishing colonies of worker bees with rich food reserves. They might then have begun to plunder their neighbors occasionally, and having been successful, came to specialize in the end in criminal activities, to which end their strong aggressive instinct developed. Then the rudimentary corbiculae, no longer needed, would have ceased to develop and would have disappeared.

All of this is no more than speculation, because there has not been enough study of the robber bees to clarify their evolutionary history. It is not even known precisely what role they play at present in the complex ecology of the tropical and semi-tropical zones they inhabit, from the Amazon region of Brazil, where it is supposed they originated, to Mexico.

They do not have any pollenizing function, because they do not visit flowers. Nor is it known if they serve to control harmful insects. Their attacks are limited to the colonies of other *Meliponinae* and apiaries where European bees are being raised, such that they are regarded as a scourge. But they are not a direct threat to man. The *Lestrimelitta*, the real killer bees, sometimes even live in the heart of urban areas, winners in the millions of years of struggle for survival.

5157

CSO:5400/2046

DOMINICA

COCONUT MITE DAMAGE INCREASING; CONTROLS BEING WEIGHED

Roseau THE NEW CHRONICLE in English 11 Apr 86 p 13

[Text]

Coconut mites are one pest that growers here will have to live with, says coconut mite specialist Dr. David Moore. Jamaican Coconut growers have been tolerating a 2 - 3 % loss of production due to coconut mites, he says.

He recently spent three days here looking at the coconut mite problem and reported that the pest in some areas here is as extensive as in some parts in St. Lucia where the coconut mite is presently posing a serious threat to coconut production. The areas of Calibishie and Woodford Hill appear to be the most heavily infested.

The coconut mite is a very small insect-like creature which feeds on young growing coconut husk tissue. Besides scarring coconut husks, the mites cause the production of smaller nuts, the production of less nuts per year and nuts which are difficult to husk.

According to an official of the Coconut Rehabilitation and Expansion Project, the effects of mite on coconut production here has not been measured but its effects has not been felt at the processing plant level.

Whatever the effect of mites on coconut production, farmers can minimise production loss by increasing overall

production, said Dr. Moore. Among the measures he recommends are: rat control, sanitation, drainage, weed control and the replanting of old trees.

Where did the mites come from? Mr. Frank Schneider, Director of the Coconut Project says the mite was not recently introduced here since farmers have reported seeing signs of mite damage many years ago.

But in the past two years, reports of mite damage has escalated. "We must have thrown something off balance", Mr. Schneider said.

The coconut rehabilitation project is presently working on a mite monitoring and surveillance programme. Project officials are also undertaking preliminary control trials using some of the same chemicals which were unsuccessful in control experiments in St. Lucia, hoping that environmental differences will yield better results.

Chemical control of mites is compounded by a number of factors. One major constraint is the height of mature bearing trees which makes ground spraying difficult. Another fact is the area in which mites live and feed. Coconut mites hide below the green bracts of

young nuts, often at the "button" stage. As the nut grows the feeding marks radiate from under the bracts in the form of triangular yellowish green or whitish areas on the nut surface. As nuts continue to grow the damaged areas become corky, may crack and exude a sticky gum-like substance.

In the search for control measures, Mr. Schneider said Shell Chemicals may soon introduce a "pesticide nan" which will be driven into the trunk of the tree. Scientists have been reluctant to recommend chemicals which persist for very long in the plant because of the dangers of residues in the "jelly" and water of young nuts.

One probable measure of control is biological control.

One other measure officials here hope to implement is the use of resistant varieties. Mr. Schneider says the project may consider the introduction of the MAYPAN variety, widely grown in Jamaica, which shows some measure of resistance. Selection of nuts from local high yielding types which appear to "stand-up" to the pest may be used in the production of plants for future plantings.

/9317

CSO: 5440/081

11 June 1986

GUYANA

GOVERNMENT MOVES TO CURB COCONUT CEDROS WILT DISEASE

Georgetown GUYANA CHRONICLE in English 27 Mar 86 p 3

[Text] An order issued under the Plant Protection Act has placed restriction on the transporting, planting and harvesting of coconut palms in Regions 1, 2, 3, 4, 5 and 6.

This order, made by Deputy Prime Minister Agriculture, Cde Robert Corbin, aims at controlling the dreaded Cedros Wilt disease that has infected coconut trees in many areas of the six regions.

The order which is published in the March 22 issue of the Official Gazette restricts the transporting of coconut planting materials in all areas in the six regions. The authorisation of the Chief Agricultural Officer must be obtained for the transportation of such materials. Persons are also prohibited from planting or harvesting coconut palms in the specified areas without prior permission of the Chief Agricultural Officer.

Planting materials include the coconut palm, unshelled nuts, seedlings or the soil of the plant. Shelled nuts, dried copra, processed fibre and other manufactured products of coconut are not restricted by the order.

Meanwhile the Chief Agricultural Officer has been directed to take such precautions as are necessary to prevent the spread of the disease. He is also instructed to carry out any disinfection or treatment of any coconut planting material which is likely to infest or infect any coconut palm with the disease.

/9317

CSO: 5440/082

11 June 1986

PAPUA NEW GUINEA

COFFEE RUST THREATENS CROPS

Coffee Rust in Six Provinces

Port Moresby PAPUA NEW GUINEA POST COURIER in English 7 May 86 p 1

[Article by Peter Kili]

[Text]

CABINET may be asked to approve the immediate release of K1 million to wage war on coffee rust.

Sources close to Primary Industry Minister Mr Okuk yesterday said that would be only an initial amount. More money would be needed to control the disease, which has so far been confirmed in three Highlands provinces.

Mr Okuk told Parliament yesterday Prime Minister Mr Wingti was in constant touch with Australian Prime Minister Bob Hawke.

Foreign Affairs Minister Mr Vagi will also ask for help from other countries in a bid to save the K200 million coffee industry, Mr Okuk said.

More rust has been discovered in Western Highlands — this time, outside the gates of Coffee Research Station.

That brings to six the number of Highlands

areas so far declared as disease-hit.

Rust was first discovered last week in the Balyer River valley, followed Jimi valley, and North Wahgi area.

Rust has also been spotted in Mogi, on the Highlands Highway between Kundliwa and Chuave in Chimbu, and near Mamanda, Enga.

DPI officers in Morobe have reported that Wau and Bulolo were disease-free.

Fungicide spraying is continuing while rust is still being hunted.

Spread to Madang Feared

Port Moresby PAPUA NEW GUINEA POST COURIER in English 7 May 86 p 2

[Article by Oseah Philemon]

[Text]

PRIMARY Industry officials in Madang are worried coffee rust may have spread inland.

And the provincial government has instructed DPI officials to carry out an urgent assessment of coffee in the Bundi and Simbai areas, which border Western Highlands, Chimbu and Enga, to check for damage.

A team of senior DPI officers will leave on a chartered aircraft this morning to do a "thorough inspection" of the coffee growing areas likely to be affected, a senior agriculture officer based in Madang, Paskol Ferra, said yesterday.

More than 75,000 people live on the Highlands border and depend on coffee for their livelihood.

Mr Ferra said all coffee produced in Madang was sold to buyers who

travelled down from Baiyer River, Western Highlands, or Chimbu.

DPI officers did not discount the possibility that coffee rust may have already been transmitted to Madang through the buyers. "Three groups of four officers will comb the border region to ensure Madang is not affected by coffee rust," Mr Ferra continued.

Officers are also checking remote parts of East Sepik's border with Western Highlands, Enga, Southern Highlands and Chimbu for any signs of rust.

Provincial Secretary Paul Bengo said from Newah yesterday many Highlands rivers flowed into the Keram and Yust rivers in East Sepik, and there was a danger the disease could be spread through infected trees being dumped into the rivers.

Mystery Disease Hits Sugar

Port Moresby PAPUA NEW GUINEA POST COURIER in English 8 May 86 p 1

[Article by Oseah Philemon]

[Text]

Ramu Sugar has been hit by an unknown disease that may cost the country K4 million in foreign exchange.

Sugar production at the Ramu Valley mills could be slashed by 80 per cent, throwing into doubt the country's ability to honor its export quota of 10,000 tonnes to the United States over the next few years.

The gloomy news comes hard on the heels of the discovery of coffee rust and its threat to the country's economy.

A top Government official yesterday said Ramu Sugar management and the Department of Primary Industry had been working "like crazy" to find the cause of the disease, which threatens to destroy half of the 6000 hectares of sugar cane in the Ramu Valley.

"It is a disease that kills the cane. You cannot spray to kill the disease — you have to actually cut the cane and uproot it, then destroy it completely," the official said.

The disease reduced the amount of sugar in the cane, and that was why the company could not produce enough sugar, the official continued.

Destruction

In February, Ramu Sugar asked for Government approval to import Australian sugar to make up for a production shortfall following weevil destruction.

The company said it needed 7000 tonnes of imported sugar to meet the quota requirement.

Primary Industry Minister Mr Okuk at that time supported the move, saying imported sugar would be cheaper.

Yesterday he was not available to comment on the latest destruction.

Government officials said imported sugar would cost K300 a tonne compared with Ramu Sugar produce, which costs K700 a tonne.

It was now certain the company obligation to meet its US quota requirement was under serious threat.

The company was unlikely to meet the domestic demand for sugar, the official said.

Ramu Sugar employs nearly 3000 people and would now have to destroy half its total crop and replant over the next two years with a disease-resistant variety.

/9317

CSO: 5400/4375

SPRAYING OF WHEAT FOR ARMYWORMS ENDS

Dar es Salaam DAILY NEWS in English 3 May 86 p 3

[Text] Spraying operation at the Hanang wheat complex which was invaded by armyworms is over. The two planes which sprayed the farms left about a week ago.

The General Manager of the National Agricultural and Food Corporation (NAFCO), Ndugu Venance Ngula, said in Dar es Salaam yesterday that of the 23,600 hectares invaded by the pests, 16,800 hectares were sprayed.

Ndugu Ngula said 7,708 hectares were destroyed by the armyworms, which invaded the farms on March 28.

The armyworms invade 800 hectares in Basotu, 480 in Setchet, 2,000 in Mulbadaw, 600 in Murjanda, 2,148 in Caval, 1,000 in Gidagamowd and 680 in Warret.

The general manager said, however, not all hectares were "totally damaged" because wheat leaves had the tendency to grow again even after being eaten by pests.

He said hoped that some of the leaves in infested areas would grow again, especially at present when there was enough moisture because the current rains were falling on the wheat belt for the past two weeks. [as published]

Although the spraying was done by two planes—one from the Desert Locust Control Organisation for Eastern Africa and the other from Kilimo Anga—was over, the extent of the damage in terms of financial loss was still being computed, Ndugu Ngula said.

Ndugu Ngula also said efforts to destroy pockets of quelea quelea birds at the wheat complex, particularly in Caval and Gidagamowd farms, were going on smoothly.

He explained that the farms management had mobilized personnel to do ground spraying this was being carried out alongside the destruction of armyworms breeding grounds, to avert recurrence.

/9274

CSO: 5400/123

BRIEFS

ARMYWORMS DESTROY 650 HECTARES--Armyworms have destroyed 650 hectares of various crops in Mara Region since the pests were first spotted in the region in February this year, Shihata reported. The Mara Regional Agricultural Development Officer (RADO), Ndugu Peter Barie, said yesterday in a report that until the end of March, the armyworms had destroyed 95 hectares of millet, sorghum and maize in Bunda District. The report shows that Tarime district has been affected most and that during the period the pests destroyed 400 hectares of various crops including millet, maize and sorghum while 145 hectares were destroyed in Serengeti and 10 in Musoma District. Ndugu Barie said his office was fighting the pests using samiphion and femithrithion chemicals. On the Larger Grain Borer (Dumuzi), Ndugu Barie said the pest, which was spotted in food markets in Bunda District, had already been destroyed by the use of permephthrin 0.5 percent insecticide. He said cash crops such as cotton, sim sim and sunflower were doing well in the region following the current good rains. He said, however, that although cotton was doing well shortage of dry cells had affected spraying of the crop. Tarime District, the only one growing coffee in the region, had planted 1,870 hectares of the crop by March 31 this year, and that 17,200 seedlings had been distributed in the district. [Text] [Dar es Salaam DAILY NEWS in English 29 Apr 86 p 3] /9317

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MINISTRY OF AGRICULTURE HOLDS CROP PROTECTION CONFERENCE

Hanoi NONG NGHIEP in Vietnamese 25 Feb 86 p 1

[Article by V.P.: "Crop Protection During 1985 10th Month Season Recapitulated and Guidance of 1985-1986 Winter-Spring Plan Discussed"]

[Text] Recently the Plant Protection Department of the Ministry of Agriculture held a conference to recapitulate the insects and diseases situation in the 1985 10th month season and the plan for guiding the 1985-1986 winter-spring season in the northern provinces.

During the 1985 10th month season the weather and insects-and-diseases situation in the northern provinces were very complicated and there were shortages of materials and material bases, but with all-out, outstanding efforts the crop protection sector was able to limit the damage caused by insects and diseases and contribute positively to winning victory in production. Many localities, fully understanding that preventing and eliminating insects and diseases, made that work a permanent concern concentrated on the decisive periods. Manual methods were widely used in preventing and eliminating insects and diseases, and the use of chemicals to prevent and eliminate insects and diseases gradually met technical requirements. Clear results were attained in places in which service contracts were signed between the crop protection organ and the production base. In many places crop protection networks were organized and strongly consolidated. The specialized and professional skills of the technicians were continually improved. Therefore, damage caused by insects and diseases was notably limited and production was well protected. However, the conference also noted that because of the importance of the crop protection work the movement to prevent and eliminate insects and diseases was not uniform among the provinces and among the districts within provinces, which considerably affected production. In many places attention was not paid to manual methods in preventing and eliminating insects and diseases, and the use of chemicals did not meet technical standards. The organization of some prevention and elimination campaigns was not timely, so in some places 50 to 60 percent of the crops were damaged.

The conference discussed and unanimously approved a plan to prevent and eliminate insects and diseases during the 1985-1986 winter-spring season. With regard to rice, rice blast is the object most worthy of attention,

followed by stem borers, leaf rollers, rice hispa, brown leafhoppers, and rice wilt. With regard to corn, it is necessary to guard against *cirphis salebrosa*, which do heavy damage from the end of January to mid-February. With regard to jute, it is necessary to guard against *plusia eriosoma*, which do heavy damage from the end of May to mid-June. With regard to soybeans, attention must be paid to rust and *erysiphe cruciferarum*. With regard to peanuts, attention must be paid to borers and stem rot. With regard to tobacco, attention must be paid to powdery mildew.

Vis-a-vis techniques, combined prevention and elimination measures must be well implemented. Inspections must be stepped up in order to uncover and grasp the insects-and-diseases situation, and accurate forecasts must be made at an early date, in order to make timely recommendations regarding prevention and elimination policies and measures. The application of manual measures must be promoted. Attention must be paid to using chemicals more effectively.

With regard to the organization of guidance, it is necessary to rapidly reorient the activities of the crop protection stations along the lines of fulfilling the state management function while engaging in technical services, managing materials, and guide the effective use of and the building up and training of the corps of crop protection cadres at the basic level.

Insecticides and pumps must be meticulously prepared, and special attention must be paid to managing materials in the cooperatives.

As we begin 1986, the crop protection sector will undergo a strong transformation in accordance with the new mechanism, and capabilities, intelligence, and materials will be brought into play to serve production. the agricultural production mission is becoming increasingly great and the protection of production is becoming increasingly difficult. The crop protection sector is determined to, along with the other sectors, win total victory during the winter-spring season.

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END